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Quit Hanging Rainbows over the Tennessee Mountains

Sooner or later the TVA, in the opinion of the author, must face an auditor

BY HERBERT COREY

ONE thing was done by the Supreme Court of the United States when it handed down its decision on the TVA. It put the whole matter of the administration's plan of building government-owned super-power stations up to the voter and taxpayer.

If the voters and taxpayers want them they can have them. That is as it should be in a democracy. But before the voters and taxpayers decide that they want more government-owned power it is only fair that they should be told the truth about the TVA. The TVA is the test tube of the whole plan.

They have not been told that truth up to the present. A gaudy swindle has been practised on them.

I have the utmost sympathy for the swindlers. They have been moved by diverse and irresistible motives. Some of them are hungry for power. Some are jerky with ambition. Some are entirely honest believers in government ownership and some want to spread the use of safety razors and maternity belts among the "peasants." That is not my word. I never heard American farmers referred to as "peasants" until some one let Rex Tugwell out. Some of them see financial profit ahead. All of them,

broadly speaking, have been on a kind of a camp meeting jag. They have gotten themselves into a highly emotional state, so that each believes what he says and what all the others say. For the sake of the record I will maintain that each of them is an honest man in his personal relations, takes a daily bath, and is kind to animals. For all that I think they have been practising a swindle on the people.

If the Tennessee valley experiment were something that could be ended by congressional act or executive fiat tomorrow this would really be nothing to worry about. Politicians do not habitually speak all the truth and we all know it. We get stirred up during a campaign not because we believe what we are told but because we are witnesses and participants in a swell scrap. The man who is a yelling dervish the day before election is cold as an Eskimo's dog the day after. But that experiment in the Tennessee valley might go on and spread. The Supreme Court has made this plain. It said in effect:

> Power may be sold in the competitive market if produced at dams built by the government in pursuance of certain constitutional objectives, such as navigation improvement, flood control, and the like.
>
> Power may not be sold if produced at dams which were built for the sole purpose of manufacturing power.

This was assented to by the government in Solicitor General Stanley Reed's brief. No debate will henceforth be possible on that facet of the situation. It is merely meeting the facts squarely to say that most dams at which power can be produced can be presented to the people as being primarily navigational and flood control projects. In other words practically every dam proposed by the administration comes under that heading. Even Passamaquoddy might be defended as a scheme to make the Eastport harbor safe. *Quien sabe?*

Therefore these huge power projects can be legally built in the future if the voters say aye. It is true that the Supreme Court refused to pass on the constitutionality of the TVA project, but that makes no difference at all. The High Court might rule that the taxpayers could not legally be mulcted to force cultural benefits on the people of the Tennessee valley. But the building of high dams for navigation, flood control, and power production could not be interfered with under its decision of February 17, 1936, except by the voters. It is only fair and decent and honest that they should be told all the truth about the TVA, for the building of these other dams is predicated upon the success of the Tennessee valley project.

And the TVA and the other dams will add a burden to the taxpayers which cannot be estimated at this time. Not one of their defenders has ever had the courage—and perhaps the knowledge—to say what they will cost. Yet we know that tomorrow's inescapable tax burden is more than the American has ever been called on to shoulder previously. I do not propose here to discuss today's and tomorrow's taxes, but I will quote one pregnant sentence from an article recently written by Nicholas Roosevelt:

"It is estimated that 53 separate taxes go into the making and selling of a loaf of bread."

If the voter and taxpayer is put in

possession of all the truth about the TVA, and then votes for an extension of the superpower plan, and gets it, and does not like it after he gets it, he can only blame himself.

But to lie to him in the present moment, and therefore fool him into taxing himself and his children and his grandchildren to the breaking point to pay a debt which should never be contracted is pretty damnable.

LET us—as Al Smith says—have a look at the record.

The TVA project was presented to the people as one of social and cultural value. It is this phase of the TVA that has not been passed on by the Supreme Court of the United States. It is not yet certain that the taxpayer in Kankakee can be assessed to make life more abundant for the resident of Knoxville. All the emphasis was put on the good that could be done. Denuded hills were to be reforested, gullies filled and protected by growing grass, lands that had been sapped of their final strength-giving unit were to be returned to fertility. All of this, under the American system, had previously been matters for the individual, the county, and the state to do and pay for. It will be admitted that they had not done or paid for anything of the sort. The Tennessee valley was on its way to become one of the Great American deserts. Perhaps the Federal taxpayer should properly have been fined for the Tennesseean failure. The Supreme Court has not passed on that.

But in that original bill creating the TVA, jokers were hidden. The production and sale of surplus power was permitted at the dams to be built by the government. Every one knows what is meant by "surplus" power. No one saw that farther along in the bill were hidden words permitting the manufacture of unlimited power. The joker was obscured and clouded by other windy generalities about the good that should be done to the Tennesseeans, but it was there. The voter and the taxpayer knew nothing about it. The TVA bill went through Congress at a time when we were all legitimately scared about other things. There was some little discussion about the permission to make and sell power, but very little.

BY the light of experience the fact can be read in that TVA bill that it was primarily a power bill. But it was sold to Congress and the people as an uplift measure in which power production was only incidental.

Morgan, Morgan, and Lilienthal told about the loveliness that would flood the valley. The town of Norris was built below the Norris dam as a sample of the sweetness to come. Not more than twenty or thirty employees will be needed to run the dam when it is completed, and Norris has houses enough for several hundred. No industries have as yet been provided to

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keep the several hundred busy, in order that they may buy certified milk from the registered cows. But no one worried about these things. Norris is a charming little village and the taxpayer had not yet gotten along to the point of counting the costs. It was accepted as a show window display in the great scheme.

At this time the two Morgans and Lilienthal were still insisting that the TVA was navigational and defensive and flood control in intent, and that power was purely incidental. Dr. Arthur E. Morgan, the chairman of the Authority, told that to the Military Affairs Committee of the House when further appropriations were being considered:

"From the first time I talked with the President about the project, power was hardly mentioned," said Morgan. Lilienthal backed him up.

IF the power cat had been let out of the bag at this time it would certainly have been more difficult to get more money for the Authority. But the money having been obtained, the Authority began to talk more freely. In March, 1935, in a signed article in the *News* of Chattanooga, Tenn., David E. Lilienthal wrote:

> These dams are not being built for scenic effect, these millions of dollars are not being spent merely to increase business activity in this area. These dams are power dams, they are being built because they will produce electric power.

Arthur E. Morgan said:

> There are a dozen other sites which, if in fifteen years we run short of power, could be utilized and we could come back (to Congress) and ask: "What about these?" . . . Twenty or thirty dams would be required completely to develop the resources of the Tennessee river.

John B. Blandford, Jr., the assistant chairman, in a radio address said:

> A dam is not an isolated structure or operating unit, but part of a unified development of a water system with power produced at half the cost of unorganized development and with *valuable by-products in flood control and navigation.* The italics are mine.

These statements unquestionably disclose the true intent of the TVA. It was pronunciamentos of this sort to which the Supreme Court presumably referred when it said in effect that it need not take into consideration the announced intent of the Authority until it was translated into action. The court had accepted Wilson dam and the Authority's operation there as within the frame of law. Each of the other dams must stand on its own bottom as regards future legal action.

The voter and taxpayer could have no sound complaint if the TVA had made this position clear from the beginning.

BUT it developed that Messrs. Morgan, Morgan, and Lilienthal had out-talked themselves. They are a remarkably vocal trio. At any moment they are apt to burst into oratory. When the TVA Case drew near the Supreme Court they were warned by their own lawyers that if they continued to present the Tennessee valley project as one for the production of power they would lose their case. Whereupon they right-about-faced promptly. The scheme again became one for navigation and flood control primarily.

That was an excellent and successful legal stratagem.

But in putting it forward they threw the "yardstick" of which so much has been heard out of the win-

The TVA Right-about-face

"WHEN the TVA Case drew near the Supreme Court they (THE TVA AUTHORITIES) were warned by their own lawyers that if they continued to present the Tennessee valley project as one for the production of power they would lose their case. Whereupon they right-about-faced promptly. The scheme again became one for navigation and flood control primarily."

dow. If the principal costs of dam-building are to be assessed against navigation improvement, flood control, and national defense, and the production of power is merely an incidental, then it seems clear that the Tennessee Valley Authority cannot honestly claim that it is producing power on a basis of costs that can be fairly compared to the cost-base of any private utility. A paragraph in an editorial in the *Washington Post* puts the case clearly:

> When dams are built by the government for the purpose of improving navigation there would seem to be no limit to which local power rates might be reduced. But should the taxpayers of the nation subsidize this specially favored group of electricity consumers?

No member of the Tennessee Valley Authority has alluded to this phase of the situation at the moment of writing.

THE facts cannot be evaded or laughed off. Either the "yardstick" has been finally disposed of, or else the claim made before the Supreme Court that power production is incidental was false. It is not possible both to have and to eat a cake.

Unless the members of the TVA candidly accept one or the other alternative it seems to me they are discovered in an attempted swindle. If they are fair and honest men they will make a statement to the public. It is the tax-paying public which must meet the costs of their undertaking.

I do not think they have been fair and honest in their dealings with the public. Perhaps no one in their position could be, humans being unquestionably humans. Too much is at stake for each of them. If the TVA were to go to pot, and the ultimate pottedness were to be traced to an unwise admission by Dr. Arthur E. Morgan or to an impolitic concession by David E. Lilienthal, they would probably join Major General Johnson Hagood in what was almost confinement to quarters; but without the

general's come-back. Hagood said, it will be remembered, that government money is being spent foolishly:

"It is harder for me to get a nickel with which to buy a lead pencil," he declared, "than a thousand dollars to build a scenic footpath."

THERE is, for instance, the matter of the percentage of the total cost of the TVA adventure which should be charged to navigation improvements. It is obvious that the greater that percentage the smaller the charge to be set against the cost of producing electricity. Fortunately for the voter and taxpayer who wishes to keep himself informed, these percentages have been estimated by an impartial and certainly a competent authority. Congress directed the Engineers' Corps of the U. S. Army to survey the Tennessee river and its tributaries, in order to discover how much the navigation improvements would cost. The report of the Army Engineers may be found in House Document 328, 71st Congress, second session. The Engineers state in effect:

That the Tennessee river can be made navigable from Paducah to Knoxville by a series of low dams; that these dams will cost $75,000,000.

But that if it is desired to substitute high dams for the low the project would cost about $250,000,000.

That the greater expense is not needed unless private interests are willing to absorb the difference in return for power.

AT that time no one thought of the government going into the power business competitively. It appears that the net difference between a series of purely navigational dams and a series of navigation-plus-power dams would be $175,000,000.

Then that would appear to be the cost of the power projects now being built by the government on the Tennessee river and its tributaries?

Not at all. Another factor must be taken into consideration. The TVA also proposes to reduce damages from flood control. No one can say to what extent the TVA works will control future floods. If the reservoirs were filled by one flood, and another flood dumped on top, then the water would run over the tops of the dams and flood the valley below just as if the dams were not there. But that would be what the engineers call "a five-hundred year flood" and is nothing to worry about. It may be assumed that these dams would control the annual high waters to a considerable extent.

The question is then: Just what damage do these high waters do?

The Army Engineers can answer that one, too. They have made a comprehensive study of flood damages on the Tennessee river and its tributaries, and have come to the conclusion that they amount to $1,400,000 for the average year. This is considerably higher than some other estimates. It is, to the best of my knowledge, the largest sum that has ever been suggested by any qualified authority. That sum could be produced if the capital fund of $40,000,000 were let out at 3½ per cent interest. The balance sheet of the Tennessee river project then stands:

Cost of navigational works ...	$75,000,000
Cost of flood control works ...	40,000,000
	$115,000,000

For this same length of river the TVA proposes to spend $236,000,000 on eight dams. Then the cost of the power production portion of the scheme may be discovered by a simple process of subtraction:

TVA cost for navigation, flood control, and power	$236,000,000
Army Engineers' cost for navigation and flood control	115,000,000
Cost of power production installation	$121,000,000

That seems fair enough. One hundred and twenty-one million dollars is a sizable sum even in these days, when we are all billion-drunk. But without descending to a vulgar employment of figures Mr. Lilienthal denies this statement of the case. He has said:

> It is almost unthinkable that this power should not be made available since with a relatively small additional investment it can be harnessed and put to work.

It seems to me that $121,000,000 is not a small investment. It is certainly not small "relatively" since it is $81,000,000 more than the Army Engineers allow for flood control, and $46,000,000 more than they allocate to navigation, and these are the only sums to which it can be relative in this instance. It is difficult for the voter and taxpayer to keep these large sums in his memory, of course. Those who gaze upon Mr. Lilienthal's ingenuous countenance and listen enthralled to his pure periods are to be forgiven if they forget that $121,000,000 is in fact more than one half of the whole sum of $236,000,000 which the TVA itself has estimated to be the cost of the whole scheme. More than one half of a sum is not a relatively small part of that sum, no matter how it is figured.

It is to be regretted that in the press of public works Mr. Lilienthal has failed to discuss with the voters—and taxpayers—this wide difference between the TVA figures and those furnished by the Army Engineers. I will admit that in such a discussion Mr. Lilienthal would be somewhat handicapped. He could hardly call an Army Engineer a robber baron or a predatory power without laughing. And one of Mr. Lilienthal's strongest points is his fine gravity.

Outside the ranks of fanatics it may be assumed that no one in the United States wishes to injure the utility industry. Or any other industry. The industries pay the taxes that keep the government going. At least they pay a good share of them. The seven companies which serve the territory immediately surrounding Muscle Shoals have now approximately 25 per cent surplus capacity. This can be added to as the need arises at a comparatively small cost, unit by unit. The total investment is $900,000,000. These companies have reduced rates

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with fair regularity on a long range program laid out before the TVA was ever heard of. As there is no surplus market it follows that when the TVA sells its power it must sell in competition with these companies. The TVA laughs this off. It insists that there is an abundant available market.

MR. Lilienthal has said that vast quantities of the Muscle Shoals power can be disposed of in these three ways:

1. By use in the fertilizer works at Wilson dam.—Even Mr. Lilienthal will have to admit that this is just so much goose grease. The fertilizer works are barely turning their wheels over. The TVA's chief chemist has admitted that they cannot produce fertilizer in competition with privately owned companies.

2. By handling the gates on the navigation locks and lighting the government buildings.—When the TVA's program is complete it will have 3,000,000 available horsepower. At a guess that would lift and lower every water gate in the United States as often as need be, and would light all the government buildings in the United States, and enough juice would be left to turn the floodlights on Hollywood.

3. In the construction of dams.—Well, after all, Mr. Lilienthal. Really! That seems unworthy of you. Even if a lot more new sites were to be found on which to build new dams the dam-building must come to an end sometime. Either the river banks or the taxpayers will be exhausted. In any case the building load is a minor one.

Is that kind of a statement being fair and honest with the voters—and with the taxpayers who must settle for these dams, turbines, and whatnots? Is it not a fact that the voters and taxpayers have the right to demand candid and truthful statements from the TVA? I am not the only writer who has urged the administration and the TVA to submit to an examination by qualified and unbiased experts in order that the truth shall be made known. There has not been even a whimper of response from Morgan, Lilienthal, and Morgan.

Yet if the truth is not as set forth by the propagandists of the Authority, is not the Tennessee valley adventure a gaudy swindle? For example—

IN 1931 Colonel M. C. Tyler of the Corps of Engineers of the U. S. Army, analyzed the prospective market for the power to be made at Muscle Shoals. He concludes that the government can only sell its power by offering great inducements to consumers—which the TVA is doing—and that the prospective saving to consumers in the Muscle Shoals area would be approximately $18,000,000 over a period of fifteen years. This could be accomplished, he estimates, at the cost of a $40,000,000 loss to the government. To put the facts differently:

Tyler estimated that to run the Muscle Shoals plant for fifteen years would cost the U. S. Treasury $40,000,000. Every dollar of it would come out of a taxpayer's pocket.

This cost of $40,000,000 would save $18,000,000 to individual consumers in the Tennessee valley area.

That is what Colonel Tyler thinks of it.

No one, so far as I know, has been able to find out what Morgan, Lilienthal, and Morgan think of it. They have an arrogant indifference to what other people think that is admirable when they are on my side and pretty irritating when they are not. Nothing more infuriated the TVA than the insistence by Comptroller-General McCarl on his right to audit the Authority's accounts. The recently introduced bill providing for the creation of a Mississippi Valley Authority provides against this. The Comptroller-General is permitted to audit—interference with this duty imposed on him by Congress might not be assented to by that body—but he will be held in bonds.

When he audited the TVA he remarked, for instance, that the annual depreciation charge should be $1,000,000. The TVA had only charged itself with $82,000. It is no part of the business of the Comptroller-General to argue this matter out for the benefit of the taxpayer. He merely stated the conclusion he had reached and his reasons for reaching it. The managers of a privately owned business would not have been permitted to treat McCarl's statement with lofty indifference. If their stockholders were damp fools enough to let them get away with it the SEC would be snapping at their heels. The position of the TVA is that they must not be bothered.

That's all right with me if it is all right with the taxpayer.

There are other matters which can be taken up with the TVA whenever its commissioners show a disposition to discuss for the benefit of the ultimate taxpayer the costs and losses of the adventure. The time has passed for hanging rainbows over the Tennessee mountains. Sooner or later the TVA must face an auditor and disclose whether it is being run in a business-like way or is just a song and dance.

It does seem to me that if I were in charge of such an enterprise, and I knew that my statements were all true and my statistics to be relied on and my costs were as stated and my probable income would pass the SEC and someone were to say to me:

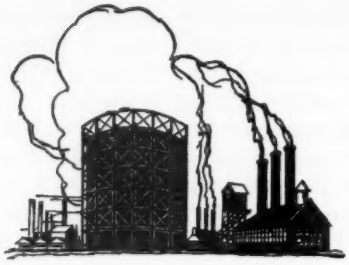
"I do not believe you—"

It seems to me I'd go to some trouble to prove that I was telling the truth. I wouldn't like to have my name cut in a cornerstone and think that in a few years taxpayers would be going out of their way to heave rocks at it.

A new record—a year without the loss of a life of a passenger in a train accident—was claimed for American railroads.

"Not a single passenger was killed in an accident on a train during 1935," asserted Harry Guy Taylor, chairman of the Western Association of Railway Executives. "Contrast this with the slaughter on the highway."

The National Safety Council has estimated that 36,400 persons died in motor vehicle accidents last year.



What Is Utility Service?

A public benefit which comprises many things the people never think about. In the opinion of the author it embraces all the problems and ideals of the industry. What customers, employees, and stockholders get from an alert utility company.

By HERMAN RUSSELL
PRESIDENT, ROCHESTER GAS & ELECTRIC CORPORATION

WHAT is service, as the public utility should measure it? How much should it encompass? How effectively can it be used as an instrument for building good will with the consuming public? These are questions that concern every utility and various companies deal with them in various ways.

Service, to me, means delivering to the home, farm, office, store, or factory, continuous and adequate supplies of gas and electricity of right quality in a satisfactory manner and at a price fair to the consumer. There is, I am sure, nothing novel or strange about such a definition.

Electric voltage must, of course, be uniform, the gas free from impurities, and the heat units and pressure constant. The company must stand ready at all times to deliver a uniform product, satisfactory and constant as to quality, and adequate as to quantity.

To do this requires plants and distribution systems of ample capacity and reliability to meet the maximum and varying demands of each customer separately as well as all customers collectively. To avoid interruptions these plants and distribution systems must be modern and carefully designed and built. The personnel to operate them must be highly trained and competent to meet the many emergencies that are constantly arising. Further, these products must be satisfactory, which means that customers must be shown how to use gas and electricity in their homes or places of business in a manner that will enable them to derive the maximum benefit at a minimum cost.

SERVICE, therefore, means more than the mere creation and delivery of a product. It means the use of the product by each customer in the most

intelligent and efficient manner. The company is really selling a service rather than a product. This requires careful, intelligent salesmanship of appliances and helpful instruction in the use of all gas and electric equipment in the home or business place. It means technical and specially trained employees to instruct and advise customers. Satisfactory service also means that all the company contacts with the public—meter reading, rendering of bills, collection of accounts, answering complaints, requests for information, and other contacts—must be handled promptly and courteously.

All this must be done at a fair price. The rate charged should be such as will permit the company to render this kind of service and maintain an employee organization fairly paid and amply protected against the economic losses of sickness, old age, and death. The rate should also be such as will maintain the company in a sound financial position, able to provide a reasonable return to those who have invested in the company's stock and bonds, and able to set aside a reasonable reserve for a rainy day. The rate must be fair to the customer; that is, it must be as low as possible and still permit the company to render satisfactory service and protect its employees and security holders as outlined above. Every wise utility management desires to lower rates as much as possible and still render satisfactory service because low rates tend to encourage use and forestall competition.

THE foregoing is often thought to comprise *all* the service that a gas and electric utility should render. My conception of utility service goes further. I believe that it is the duty of such a company to play its part in all undertakings which are for the benefit of the city or community in which it operates, such as community chests, chambers of commerce, civic orchestras, and other activities of a strictly civic nature. These enterprises are necessary to the prosperity and welfare of a community. A company prospers with its community. Its growth and prosperity are bound up with that of the city or town, or country districts it serves. Moneys spent for such community purposes are properly spent in the community's interest, which is also the company's interest. The utility is often the largest operating unit in the community and as such is looked upon as a leader to set the pace in matters of civic welfare and development.

So, we see that our simple definition of utility service, like most things simple on their surface, is really very complex and embraces all the problems and ideals of the industry.

How have we tried to work out this definition, these ideals, in practice? Our plants, gas and electric, are ample in capacity and the most modern of their kind. We have always tried to recognize the economic value of a scrap heap and have continually accumulated sufficient reserves to permit scrapping of equipment and entire plants or distribution systems when the march of progress clearly indicated that these were out of date.

IN 1917 our company wrote off its coal gas plant, scrapped it, and built what was at that time the most modern vertical plant. By 1927 the art had progressed and this plant was

itself out of date. It was scrapped and replaced by a still more modern and efficient plant. These scrap heaps meant retiring large sums from capital, but by each operation the cost of producing gas was lowered and the saving passed on to consumers in the form of lower rates. Similar procedure has been followed in the electric side of our business. Old engines have been replaced by steam turbines; old boilers by modern ones; old switchboards by more reliable units; low head water-power units combined into single, higher-head, more efficient plants, and the old equipment scrapped. Overhead electric distribution systems have been scrapped in certain areas and replaced by the safer, more sightly, more dependable underground lines. Today Rochester leads all cities in percentage of underground duct and cable with the possible exception of New York city. Generating plants and equipment and distribution systems have been kept progressively efficient and modern. The consumer has benefited by having a dependable, continuous supply of the right product at low prices; the company has profited, the employees have shared in the benefit, and the stockholders have received the return to which their investment fairly entitle them.

It is not enough, to have modern plants of ample capacity producing satisfactory products. The products must be properly used. A fine lathe is of little use unless the mechanic knows how to operate it.

Gas or electricity in the home or factory is unsatisfactory unless the housewife or plant manager knows how to use these products; how to utilize them in a way that will provide the maximum amount of benefit and convenience at the lowest possible cost. There must always be available skilled, trained employees to show consumers how they may obtain this result.

The housewife operating a gas range cares little whether the gas she receives is white or blue; whether it has 100 or 1,000 B.T.U. She wants to know that the cake which she puts in the oven will come out a product that will suit the all too particular man of the house. The child trying to get his day's school work for the morrow knows and cares little about the voltage of the electricity in his study lamp. He wants a light, ample in intensity and free from glare, that will not tire or strain his eyes.

Under the direction and leadership of the late Robert M. Searle, always a step in advance of his time, our company was a pioneer in establishing a department of trained engineers to aid the factory and store in the use of gas and electricity. Special process engineers for lighting, refrigerating, heat treating, and air conditioning are a part of this staff. A home service

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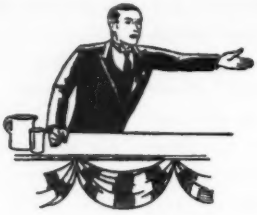
department, with trained women employees to help the housewife with her use of gas and electricity in the home, is maintained, also farm engineers, specially trained in the farmers' problems to aid the application of electricity to his special field. All of these play their part in educating the public to efficient, economical use of our products.

GOOD, dependable products and customers trained to use them are not the end of service. Service must be rendered by employees in a manner that will gain confidence and good will. We have all had the experience of buying an article and being served in a manner that determined us never again to enter the place. The quality and price were right, but the way of rendering sales service was all wrong. All employees should know and understand the value of courtesy and a smile; and should use them, not because someone tells them to do so, but because they know that such practice helps us in our duties, makes our jobs easier and pleasanter, pleases and aids the customer, and enables the company to render the service that the public has a right to expect. To these ends there is a trained service department handling customers' applications, deposits, and consumer difficulties. Departmental group meetings of all employees are held at regular periods and matters of company and departmental interest and concern are freely discussed.

Instruction in safety methods, details of the job, company policy, is given. All questions are answered and the employees are taken into the confidence of the management. The company's finances and problems are explained and freely discussed.

EVERY employee comes in contact, either on the job or off, with the public. To them he is the company. He is encouraged and expected to defend his company against unjust attack; to see that complaints and prospects are referred to the proper person for follow-up. This he will gladly do if he has been fairly treated, if he has the necessary knowledge and training required to meet the situations that arise. In short, company spirit and training are essential to good service.

This brings us to the important matter of rates or price at which the service is rendered. In the preceding paragraphs I have tried to show that there is far more to service than just gas and electricity and, by the same token, there is much more to the rate than just the cost of producing gas and electricity. What the customer is really paying for is an electric or gas service in his or her home or place of business. Unfortunately, in this political, vote-getting age, many of the elements entering into "service" as defined above are overlooked or forgotten. Rates are counted high or low by those who have some personal ax to grind, or on the basis of how they compare on paper with some other locality. No consideration or weight is given to all the many elements of service outlined above, or the differences that necessarily arise because of difference in conditions of manufacture and distribution, such as prices of raw materials, labor rates, continuity and dependability of supply, density of market, nature of the market, prosperity



Good Will and Propaganda

"Good will is good business. Which customer will buy the most of your product—the one who likes you or the one who hates you? The answer is axiomatic. I have no patience with those who accuse utility executives of needless propaganda because they use the necessary legitimate weapons to defend themselves against attack. Should any individual be censured for defending himself against one seeking to confiscate his property?"

of the community served, and many other variables, all of which play their part in determining a fair rate.

The Rochester company's rates for service rendered under conditions existing here are fair to customer, employee, and stockholder. They compare favorably with those of other cities and districts and they have been steadily reduced since the World War. Reductions in the past five years, all departments, amounted to $1,458,000. Our rates are such that today an all electric home of five persons may enjoy all facilities, cooking, water heating, lighting, refrigeration, radio, and incidental use for the sum of $12.38 per month; or the combination gas and electric home, using gas for cooking, water heating, and refrigeration and electricity for lighting, radio, and incidental use for the sum of $7.67 per month.

Surely 25 cents per day for a complete combined gas and electric service in the home is reasonable and fair to the consumer. The rates are fair to the employees, because they have permitted the company to pay decent wages, care for employees in times of illness; provide them with an adequate old age pension system, and furnish good working conditions and fair hours of labor. The rates are fair to the stockholder because they have permitted the company to pay dividends on its securities without interruption since 1904; to build up a back log of reasonable surplus and reserves; keep the properties up-to-date and in good order, and have enabled the company to do the necessary financing—that is to sell the securities necessary to permit the company to expand as its business has grown.

Because of the nature of the utility business; because such a very large percentage of those who vote are

its customers; because its business is regulated and operates under public grants and occupies the streets and highways, it is the favorite football for politicians. As the balance of voting power lies with the domestic consumers, the politician striving to keep himself or his party in power will use "Lower Rates" as his slogan even if lower rates spell loss for the utility. In these days when the policy of those in power seems to be more government in business, the rate matter is constantly in the limelight and a large part of the time of utility executives is spent in protecting their companies against unfair attacks.

No one will deny that public good will is necessary to the successful operation of any utility. After all, the people are our masters. They can destroy or make us; therefore, good will is a most important asset. There should be nothing in a company's operations that it wishes to conceal from the public. Indeed, the more the people know about the company that serves them, its policies and operations, the better the public relations.

The public must be told the facts about the company in every way at every opportunity. Expenditure of money for this purpose in reasonable amount is important and essential to the company's success.

GOOD will is good business. Which customer will buy the most of your product—the one who likes you or the one who hates you? The answer is axiomatic. I have no patience with those who accuse utility executives of needless propaganda because they use the necessary legitimate weapons to defend themselves against attack. Should any individual be censured for defending himself against one seeking to confiscate his property?

Service, good service, should also include as a part of its application, keeping the public informed as to the company and its operations, as a part of developing public good will. Our company maintains a public and employee relations department, made up of men especially competent to keep the public informed. It uses the newspapers, the radio, direct mail literature, public talks, window displays, and other means to tell the company's story to the public.

This brings me to that item of good service which has to do with the company's activity and participation in community affairs. Utilities lately have been severely criticized for taking part in these enterprises and in this state a law has been passed which makes it illegal for a company to *". . . charge any such funds to or credit the same against its operating expense account or any other account which is directly or indirectly considered for rate-making purposes."*

UNDER this law it is now illegal for the company to include, as part of its operating expenses, contributions to such undertakings as the community chest, Y.M.C.A., Y.W.C.A., civic orchestra, and other *quasi* charitable donations. All of these activities are a necessary part of the city's welfare. They contribute to its well-being, growth, and prosperity. Every citizen may, and most of them do, contribute their part toward their maintenance. Other corporations may include their contributions in the price of their goods, but the utility compa-

ny, which in most instances benefits not only indirectly but directly as well, may not do so. Wherein lies the justice?

It is good business for the company to be a member of and support chambers of commerce, better business bureaus, industrial management councils, and auto clubs—through company dues and individual memberships as the case may be. These organizations aid and protect the company's business. They afford opportunity for company key-men to make valuable business-getting contacts, and to tell the facts about the company. Three of the company's executives have been presidents of the Rochester Chamber of Commerce and others are represented on the boards of many civic organizations.

How can a utility company carry these principles of good service into practical operation? Perhaps a few illustrations showing how our own company is trying to do it will be of interest.

ALMOST any company can meet normal demands. Real service to the community, however, calls for ability and facilities to meet extraordinary demands and to have available a supplementary source of power when the regular equipment fails. Our company has both steam-generating and hydro plants but we have also an independent supplementary source of supply. We have an interconnection arrangement with the Niagara System under which we can tie into their lines in emergencies.

The value of this reserve arrangement was strikingly demonstrated in January, 1934, when one of the worst ice jams in local history transformed a usually placid river into a raging demon of devastation. The ice jam caused the water to rise 16 feet at our station at the upper falls. Sector gates at the headgates were opened, releasing a torrent of pent-up water that broke the jam but flooded the intake tunnel racks and put our biggest hydraulic station out of business. Still another large station had already gone out but through interconnection with the Niagara lines we were able to transfer sixty per cent of the total local electric load. In the meantime, every available man was mobilized to fight the ice. A force of loyal workmen battled all through the day pulling ice cakes out of the tunnel racks and at midnight were rewarded by seeing the water again rushing through the gates on its way to the turbines. Because we had outside resources that could be utilized while we battled to put our own generating plants back in commission our company was able to win its battle against "Ole Man River."

THE necessity of adequate facilities to meet any situation; the ability to anticipate and prepare for

¶ "BECAUSE *of the nature of the utility business; because such a very large percentage of those who vote are its customers; because its business is regulated and operates under public grants and occupies the streets and highways, it is the favorite football for politicians.*"

it, and the man power to handle it were again demonstrated in February, 1934, when several days of subzero temperature taxed our gas output as never before in our history. The average demand for that time of year was from thirteen to fourteen million cubic feet a day with a maximum slightly less than 16,000,000 feet. When it is stated that on February 8th we sent out 18,000,000 feet and February 9th, 19,000,000 feet, you get an idea of the strain that was suddenly put upon our resources.

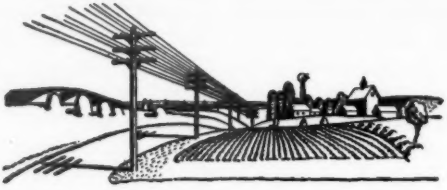
With the temperature down to 22 below zero and nearly every home in the city using gas for heat, at one time the supply in our gas holders got so low that it looked as if we were licked. With a record of seventy years of unbroken gas service to maintain, however, our men refused to admit defeat. Broken conveyor belts, the constant threat of frozen water in the seal cups in the storage holders requiring men to clamber around these huge tanks to heat the water, and a score of other difficulties all combined to make the task of supplying the extraordinary gas demand a seemingly insurmountable one.

We were able to win out because we had two extra water gas machines which were thrown into operation. These plus regular equipment, plus intelligent handling and supervision, plus loyal workers (some of whom did not change clothes for two days) enabled us to conquer the toughest situation our gas department had ever faced. Of course, when some of the people who had used an amount of gas far above their ordinary requirements received their bills they entered complaints. They had already forgotten the subzero spell and the Herculean battle to give them service, but when they were courteously reminded of these facts, in many instances, expressions of appreciation replaced the complaints.

OUR company has set up a retirement annuity plan whereby male employees of age sixty-five and female employees of age sixty are retired on pension. The company pays the entire cost of that portion of the pension which is based on service prior to January 1, 1933, and a substantial portion of the cost of the pension based on subsequent service. The employee's cost for the latter portion is practically 5 per cent of wages. The pension is accumulated in two parts. For service prior to January 1, 1933, the pension is 1 per cent of the wages for the year 1931, multiplied by the number of years of service. For service subsequent to January 1, 1933, the pension is approximately 2 per cent of wages. For example, in round figures and assuming full years of service, John Smith, reaching the age of sixty-five in 1936, with forty years of service, and wages of $2,500 per year, will receive in pension annually:

1 per cent of 37 years at $2,500	$925
2 per cent of 3 years at 2,500	150
Total annual pension	$1,075

The new Federal Social Security Bill does not provide benefits to the employees equal to the company plan so when it becomes operative the company will continue its own plan in coöperation with the Federal plan but in such a way that the pension received by the employee will be the same, although part of it will be paid by the government and part through the in-



Advice in Matters of Rural Electrification

"WITH rural electrification being pushed by every utility company the farmer needs special attention in order that he may get the greatest possible benefit out of the service now being made available to him. He needs expert guidance as to the initial wiring installation so that at some later date, when his demands increase, he will not be compelled to make costly changes."

surance company. Other activities for the benefit of employees include group insurance and benevolent association, with sick benefits.

OUR engineers work in constant coöperation with industrial plants, stores, and other commercial users of our products with a view to giving advice and instruction that will help the consumer to get more efficient results from the gas and electricity that he uses. Requirement is analyzed, equipment is inspected at frequent intervals, and operating methods are studied and checked. As a result we have many letters in our files showing appreciation of suggestions that have enabled the customer to get more for his gas or electric dollar. One concrete instance perhaps will suffice: A steam-driven air compressor was being operated at a local plant in addition to electrically driven compressors. The power factor of the purchased electricity was approximately 60 per cent, resulting in a power factor penalty. Our engineer recommended running an additional motor-driven compressor and shutting down the steam-driven compressor. He also suggested that a spare synchronous motor be run overexcited, to improve the power factor. Result—the power factor became 80 per cent and the net saving to the customer as the result of these changes was $65 monthly.

BACK in 1918 a young man decided to start a dry-cleaning business. He needed a small motor. Because of wartime demands he found it very difficult to obtain one and appealed to our industrial sales department. One of our men found a motor for him and our engineers helped to install it and start him in business. Later as his business expanded we were called in again and gave him free service and advice regarding the enlargement of his plant. On various other occasions he consulted with our engineers about plant problems and was given helpful suggestions. Today the business has

grown until it is one of the large dry cleaning establishments of the city and the proprietor never loses an opportunity to declare that much of the growth was due to the assistance which he received from this company, without which he probably never would have got started. Careful nurturing of small enterprises is a great factor in helping these firms to grow and become important customers of the utility company.

Our home service department is continually canvassing homes in the effort to aid the housewife make better use of her appliances. They show her how to operate her refrigerator economically and how to care for the various kinds of foods that are placed in it—which meats should be covered, which left uncovered, etc. They make free lighting surveys that often show the householder how to get more light at no increased expense by reducing wattage in decorative lamps and increasing it in reading lamps, and in various other ways.

If space permitted we could give many illustrations of the effectiveness of the work of this department.

IN carrying out our belief that a company owes support to activities designed for community benefit, we not only make substantial money contributions but our employees lend their services to these movements. We give financial support, as a company, to such institutions as the community chest, civic music association, better business bureau, and other civic enterprises. Last year our employees besides contributing liberally themselves, made up one entire division of fifty workers in the community chest campaign and contributed leaders and active workers to various other causes.

Another community service that has established itself as an important safety factor is the work of our inhalator crews. Originally created to serve our own employees it has now become a community asset. As the result of company safety campaigns there is little need for the inhalator among our workers but in the meantime the public has become acquainted with the efficiency of our inhalator crews and they are now called upon in a majority of the cases that involve suffocation or shock. Last year our crews responded to 82 calls, less than half a dozen of which involved employees; so, instead of being merely a company safety measure, this activity has become a recognized and appreciated service to the whole community.

REAL service calls for personal handling of complaints. You can't handle an irate customer as effectively by telephone or mail as you can by personal conference. When a company representative makes a personal call, he not only usually succeeds in adjusting the matter at issue satisfactorily, but also has an opportunity to correct erroneous impressions about other features of company policy which may be in the customer's mind. Hundreds of cases of the value of personal contacts, with a follow-up to see that what was promised has been carried out, could be cited but the following is sufficient to illustrate the point:

About a year ago a customer complained of several matters of company policy and his frame of mind may be judged by the closing phrase of

his letter which read: "With only hatred and contempt for your outfit, I remain," etc. Two representatives, thoroughly familiar with the matters involved, were sent to call upon him. They spent more than three hours with him. They let him make every complaint he desired without interruption. Then they proceeded to point out how various policies actually worked for his benefit. They offered to throw every department and all the company books wide open to him. They thanked him for giving them the opportunity of discussing the points he raised.

The result of this conference, and its effectiveness in changing his attitude towards the company, developed about two months ago when we received another letter from him. A paragraph will tell the story.

"I learned from some of your men on the job," it read, "that your company has been held up in getting a line through to a rural customer. I understand the commercial airport is objecting to your line on the east side of the road. You can solve your problem by moving the line to the west side. I control that frontage by deed and it will be a pleasure to grant you an easement."

WITH rural electrification being pushed by every utility company the farmer needs special attention in order that he may get the greatest possible benefit out of the service now being made available to him. He needs expert guidance as to the initial wiring installation so that at some later date, when his demands increase, he will not be compelled to make costly changes. Our company has created a special advisory board which offers a free service to farmers, analyzing their present and possible future needs and recommending the type of wiring job that seems best suited to each individual farm. Meetings are held in the various townships so as to make the advice of the engineering and wiring experts readily accessible to all those who will profit by it. This service helps rural customers to avoid costly mistakes in preparing their homes and farm buildings for electrification.

In conclusion it should be pointed out that we have been able to put our service creed into practical operation and at the same time show a record of continual rate reductions. There were a number of electric rate reductions between 1929 and 1935, totaling for domestic and commercial users and street lighting, a saving of $1,245,215 per year. In addition there were gas rate reductions from 1931 to 1935, totaling a saving of $246,090 per year for various classes of customers.

In Defense of State Socialism

"SOCIALISM exploits many of capitalism's methods of stimulating initiative and adds potent ones of its own. No evidence is available to support the contention that government ownership and operation, when they embrace all industries as they do in the U.S.S.R., are less efficient than other systems. Indeed, it is often argued that the waste of undercapacity production, so common throughout the world and so strange to a Soviet mind, far exceeds that flowing from inexperience and technical lag. . . ."

—LOUIS FISCHER, *Moscow correspondent for The Nation.*

Ohm, Sweet Ohm

Speaking of the TVA, why slather millions to prove that one should be able to bake 14 waffles instead of only 7 for a penny? Folks will want to know, says the author.

By JONATHAN BROOKS

Last spring a nationally known engineer came to our town and delivered an address in which he declared, "the TVA program is an insult to the engineering intelligence of the United States." His hearers, being engineers, nodded their heads in agreement and then, in keeping with their character as engineers, did nothing about the matter, deeming it political and beyond their ken.

Operators and employees of privately owned utilities muttered and complained about the TVA trends in government, but were generally so shamefaced that their complaints were either not heard or were discounted as coming from interested, not to say injured, parties. Electric customers, hither and yon, heard of the prices for energy to be charged by TVA and gave mild cheers for those prices without reckoning the costs.

But no real fuss was made, beyond the lampooning of critics by public ownership-minded newspapers, until the coal operators and coal miners protested against ruination of their business by hydroelectric generation of electrical energy. Taxpayers' money or credit, they cried, should not be devoted to the destruction of their investment and their jobs.

This protest provoked the uproar. President Roosevelt himself spoke first, and then the whole propaganda machine of the government started into action. Possibly interpreting the election as carte blanche in this matter, the President predicted the entire country would go on the TVA basis as to electric rates before the program is finished. Emboldened by his atti-

Editor's Note.—Mr. Brook's figures are somewhat in excess of governmental and other private computations of cost. It will also be noticed that he allocates the entire cost of Federal projects to power and the entire cost of transmission and distribution to the Federal government, both of which assumptions are fairly debatable.

tude, the growing army engaged on TVA and kindred projects took the aggressive and in no time at all began resenting criticism on the basis that nobody had any right to criticise.

IN the midst of the editorial and platform furore, I remembered the remark of the engineer to the effect that TVA is an insult to the engineering intelligence of the United States. So I sidestepped all government and other propaganda, sharpened two pencils, and set to work to find out what the engineer meant by his remark.

By adding up the total outlay originally planned for TVA, Boulder dam, Casper-Alcova, Grande Coulee, Bonneville, and Fort Peck hydroelectric projects, I arrived at the magnificent sum of $1,570,315,000. That is for generation. Engineers say that for each $100 invested for generating facilities, $65 more is needed for transmission and distribution of the energy to consumers. On that basis, the new electric system will cost Uncle Sam and others about $2,591,019,750 if it stays within preliminary bounds. It may or may not be necessary to emphasize the "if."

Now then, the total capacity of this plant is estimated to be 3,745,500 kilowatts, or 32,810,580,000 kilowatt hours. If the government could sell that many kilowatt hours at 2 cents, it would have a pretty business indeed. But experience shows that no electric plant sells its capacity. People sleep part of the time, and shut off their uses of current; factories close down some of the hours out of the twenty-four, and housewives cook only around mealtimes. A plant that sells half its capacity is supposed to be doing very well. The engineers speak of "load factor," and this is approximately what they mean;—a 50 per cent load factor should make for good and profitable operation.

INDEED, some of them say the government can hardly expect a 50 per cent load factor in its fields of operation because these are not notably industrial fields. Industry alone provides, normally, the daytime load, or about one half the total load. But granting a 50 per cent load factor, then the TVA and similar projects could turn out for sale some 16,405,290,000 kilowatt hours. Making reasonable allowance for transmission, transformation, and distribution losses, this figure comes down to 12,303,967,500 kilowatt hours to be used by consumers.

Make a ring around that number, for a moment. The biggest electric company in my state averaged 2.2 cents per kilowatt hour for all its sales last year. The municipally owned generating plants in my state averaged 3 cents. In each case the average revenue is from one third to one half the top step of the rate scale. And TVA talks of 3 cents as the top step, with rates grading down to a little more than nothing. Suppose the TVA average is half the top step.

Then, at a cent and a half, TVA projects could expect to take in, from the sale of that enormous number of kilowatt hours, digited out at length above, some $184,559,512. That would be the gross revenue on a total investment (minus operating expenses) of $2,591,019,750. Here is where the engineer's comment about the insult comes into the picture.

Privately owned company managers, in the old days we now hark back to as having been normal, used to speak of turnover as something that happened in the electric business once in three to five years. Now they say turnover once in five years is good operation. The average in all municipal generating plants in this state is once in 4.39 years, whereas a merchant may enjoy a turnover two to five or six times in a single twelve-month.

BUT TVA ideas, figured roughly as above, would indicate a turnover once in fourteen years! There, it must be, is the insult,—we are told the government can enter a business without previous experience, cut sale prices in half, and do it on a sound economic basis. But those of us who are engineers do not believe it. To the engineer, it is impossible.

There is another way of arriving at what the engineer terms the economic impossibility of TVA ideas. It is a fair supposition that the government expects to earn back, out of the business, the taxpayers' money it is putting into the business. If it is able to retain 32 per cent of its gross revenue after providing for all operating expenses, as the municipal generating plants in this state did last year on the average, it may own the hydroelectrics clear and have the investment back in, —you guess! Forty-four years!

But,—this makes no provision for interest on the $2,591,019,750 which the people of the United States, by their government, will have invested in the TVA plants. At 4 per cent, if it is reasonable to suppose we are entitled to interest on our money, that would require $103,640,790! Which is almost twice as much as the TVA layout has left after operating expenses in any one year!

Assuming, however, we are *not* entitled to interest, then we should own the plants in forty-four years. How-much they will be worth at that time, there is no present sense in trying to compute. The point here is, that as taxpayers, or owners, the government is putting us into a business that even an amateur would call "lousy." Government figures to justify the projects constitute the insult to our engineering intelligence.

IT may be doubted that we have a national engineering intelligence, else there would have been a greater outcry against the government's venture into a business already as thoroughly socialized as any other. If there be any question as to this description, let us examine it. The privately owned companies used to talk of their large numbers of employees and the tremendous spread of ownership and investment.

The government, with a frown, dis-

¶ "So *far as I know, nobody has complained that she should be able to bake 14 waffles or curl her hair for two months on a penny's worth of electricity. But the TVA program is going to mend the matter anyhow—so its sponsors say. Henceforth, customers may toast not merely 24 slices, but 48, for a cent!*"

counts that talk nowadays, although it is perfectly legitimate and just as pleasant, to the ears, as the great bulk of TVA propaganda. Let the government have its way, and let us forsake that angle. What of socialization as to use of electric service, socialization of price?

The wishful engineers promoting public ownership approached the situation with those two points foremost in their thoughts or wishes. As to use, there is this to be said: the electric industry is young. Transmission of energy over a distance, with ensuing good and dependable service, is younger still. Engineers in the early days of the industry lost time deciding whether direct or alternating current is the more practicable. Failing municipally owned ventures delayed progress, in many places. Varying money markets made capital hard to obtain sometimes when expansion seemed possible.

But with all the handicaps it encountered, the electric industry of the United States in 1933 had more than 20,000,000 domestic customers! That was a gain of 20 per cent as against the year 1926, showing that progress toward socialization of the use of energy continued through the worst depression the country has known.

ANYBODY'S guess as to the total number of homes in the United States is as good as another's. Whatever the guess, the percentage of homes with electric service available is high. And it would be still higher except for the fact that economic conditions have robbed many homes of the ability to use electric service at any price, even the 50-cent or dollar monthly minimum, these last few years.

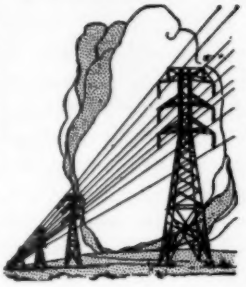
In cities, service to 95 per cent of the homes is not uncommon. Rural service, while becoming more general, is not so universal because it is naturally more costly. Uses that have lately been found for farmers are becoming common only slowly, because both the farmers and the companies alike are hard put for money with which to set up the facilities for service.

Socialization of use has been made possible by socialization of price. At the same time electric service has been taken into 20 per cent more homes, the average domestic price per kilowatt hour has been reduced 22.9 per cent, or from 7 cents to 5.4 cents. That reduction in price has not merely enabled more homes to use energy, but at the same time has enabled more homes to use *more* energy. The average domestic usage in 1926 was 427 kilowatt hours, whereas in 1933 it was 604, an increase of 41.4 per cent! If these figures do not prove a social development in the electric industry, then your mathematical, philosophical intelligence is being insulted.

IT might seem odd that the government, so zealous to reduce electric rates, perhaps even so vindictive to punish the entire electric industry for the transgressions of some of its factors, should pick out the most widely socialized industry (save possibly insurance) as the first for its tremendously expensive experiment in socialization. But it would seem odder still if one deserted theories and concentrated on a few simple facts.

What Does TVA Cost Us As Owners?

"As a taxpayer, far from the TVA or any of its cousins, living where there is plenty of power and lots of people to use it at rates that do not seem to annoy them much, I am now being told that TVA is already a huge success. It has delivered current at low rates and people are using more of it than they did! It costs them, as customers, less; but, alas, we are not told yet how much it costs them and us, as owners of the layout."



This big company in my state which, as I said awhile ago, averaged 2.2 cents per kilowatt hour for all the energy it sold last year, operates on a domestic rate schedule that may be called typical or average. It sells the first 30 kilowatt hours at 6.5 cents each, 30 more at 4.5 cents, and all over 60 used per month at 2.5 cents per kilowatt hour. That is not an especially low rate schedule, nor yet a high one.

The company advertises that a customer, with its energy, may clean three 9x12 rugs at one cent for electricity, or wash 26 pounds of clothes. For one penny, it says, the customer can bake 7 waffles, or cool a refrigerator for more than 3 hours, operate a fan almost four hours, or iron 3 shirts, toast 24 slices of bread, operate a radio an hour and a half, or curl her hair for one month! Oh yes,—or make 12 cups of coffee! Nobody has questioned these prices.

So far as I know, nobody has complained that she should be able to bake 14 waffles or curl her hair for *two* months, on a penny's worth of electricity. But the TVA program is going to mend the matter anyhow,—so its sponsors say. Henceforth, customers may toast not merely 24 slices, but 48, for a cent!

THE worth of the service to the customer, now or in the future, does not count, in reckoning the price. And neither does the cost to the producer. For TVA and similar projects totaling up to $1,570,315,000 without transmission and distribution, or to about $2,590,000,000 *with* those necessary adjuncts, will have enough capacity to serve all the domestic customers in the United States! If, in parenthesis, it can reach as many as 2 per cent of them! TVA propaganda speaks of saving millions which may be spent thereafter for other things and services; but ignores the billions invested, on the one hand, and the pennies in which it is to deal, on the other.

There is no disposition here to defend the privately owned power companies or their rates. The companies will speak for themselves as much as they dare, although the government is discrediting their propaganda at the same time it is spreading more of its

own than the companies ever dreamed of attempting. Nor is there any intention here to besmirch that part of the TVA program aimed at the improvement of life in the sparsely settled regions in which the various TVA offspring are being planted.

At the outset, as stated, this rambling through a maze of mathematics was intended as an effort to discover how the engineering intelligence of the United States is being insulted.

IF the nation, which is putting up the money for this latest type of noble experiment, realizes that Uncle Sam is digging so deeply into its pockets in order to impugn its horse sense, then there will be an uproar that *is* an uproar! The pot and kettle feud between TVA's and the electric companies will fade out, and the shadow boxing between the government and the coal industry will be overshadowed and both outboxed and outfought.

Questions will be asked. Why socialize further one of the most nearly socialized industries? Why invest three times as much to do it as the hard-belabored companies have invested per unit of service? Why slather these millions to prove that one should be able to bake 14 waffles, instead of only 7, for a penny? Folks will want to know.

Then the wishful engineers who started with the low rates they envisioned as desirable and necessary and figured back, instead of starting with an efficient plant and an economically computed investment to see how low the rates could be made with them,—then they will begin to realize there is something in the formula for electricity that also lives and must be reckoned with in public opinion.

One of the engineers I cross-questioned in order to find out about this expensive "insult" was telling me awhile ago about the formula. It runs: C equals E divided by R,—meaning, I think, that the amount of Current you get is equal to the amount of Energy which started your way, divided by the Resistance it encountered on the road. Some of it leaks out at the power plant, and some of it is used to help generate more energy and to facilitate its distribution. Some of it encounters Resistance.

THIS Resistance, it seems, is measured in Ohms; while that part of the Energy which arrives safely at your house and curls your hair at 1 cent per month (two months, TVA schedule) is measured in kilowatts. This capital R, I fear, will loom large before the wishful TVA's one of these days; and will require a better Ohmeter than propaganda to measure it. And if I owned an electric company or any stock in one, I should adopt Ohm, Sweet Ohm as my national anthem.

Since I do not, I merely wonder whether I am being insulted again. As a taxpayer, far from the TVA or any of its cousins, living where there is plenty of power and lots of people to use it at rates that do not seem to annoy them much, I am now being told that TVA is already a huge success. It has delivered current at low rates and people are using more of it than they did! It costs them, as customers, less; but, alas, we are not told yet how much it costs them and us, as owners of the layout.

Financial News and Comment

By OWEN ELY

Refunding Operations Resumed

THE sharp April dip in the stock market resulted in cessation or postponement of many bond-refunding plans, but the creeping recovery during May which thus far has regained about one half or more of the decline, has proved somewhat reassuring. Moreover, despite market irregularities, most of the leading utility offerings of the past month or so are still quoted at premiums over the offering prices:

	Original Price	*Current Bid About*
Brooklyn Edison 3¼s	101½	101⅞
Consolidated Edison 3¼s	101	104⅜
Consolidated Edison 3½s	99½	103⅜
Minneapolis Gas Light 4s ...	102⅝	103⅝
Pacific Gas & Electric 3¾s ...	102¾	104⅜
Pacific Tel. & Tel. 3½s	101½	102¾
Saguenay Power 4½s	100	98½
Wisconsin Gas & Electric 3½s	101	102¾

The $55,000,000 Brooklyn Edison 3¼s offered May 25th at 101½ by a Morgan Stanley & Co. syndicate enjoyed the usual favorable reception accorded offerings by that firm. The only other recent utility issue was the $3,100,000 Minneapolis Gas Light Co. first 4s of 1950 offered at 102⅝ by G. L. Ohrstrom & Co., Inc.

Utility financings now scheduled for early offering are the following (dates given are those when SEC registrations become effective): May 27th, $22,000,000 Peoples Gas Light & Coke Co. 4s (Halsey Stuart & Co., Inc.); June 3rd, two El Paso Natural Gas Co. offerings —$7,500,000 first A 4½s, 1951 and $3,750,000 convertible debenture 4¾s, 1946 (White, Weld & Co.); June 4th, $25,000,000 Wisconsin Public Service Corporation first 4s, 1961. Issues apparently scheduled for June 15th include: Oklahoma Gas Service Co. (formerly Oklahoma Natural Gas Co.) issues—$20,000,000 first "A" 4½s, of 1951 and $10,000,000 convertible debenture bonds due 1946 (Stone & Webster and Blodget, Inc.); $9,000,000 Central Maine Power Co. first "H" 4s, 1966; $17,500,000 New York State Electric & Gas 4s (these issues have been postponed from time to time). The two issues of Montana-Dakota Utilities Co. (formerly Minnesota Northern Power Co.)—$12,500,000 first "A" 4½s, due 1956 and $2,450,000 serial debentures of 1937–43 (Field, Glore & Co.)—were scheduled for offering about May 25th but were presumably postponed due to general market conditions.

NIAGARA Falls Power Co. is expected to file a registration statement in the near future covering $32,000,000 refunding 3½s; Morgan Stanley & Co. will probably head the underwriting group.

There has been little if any recent stock financing by utility companies. An offering of 100,000 shares of Dayton Power & Light Co. 4½ per cent preferred stock, underwritten by a group headed by W. E. Hutton & Co., was expected to be made about May 20th. It was postponed until sometime in June due to market conditions.

An issue of $26,000,000 Public Serv-

ice Electric & Gas Co. first and refunding 3½s due 1966 has been approved by the New Jersey Board of Public Utility Commissioners.

Two companies filed registration statements May 25th, indicating new issues on or about June 14th: Wisconsin Power & Light Co. registered $32,000,000 first "A" 4s due 1966 and $3,700,000 serial debenture 4s, 1937–46, the principal underwriters to be Field, Glore & Co. On the same date California Water Service Co. registered $10,000,000 first "B" 4s due 1961 and $550,000 serial notes due 1937–46, to be underwritten by Dean Witter & Co.

International Telephone & Telegraph Company has deferred its $35,000,000 financing operation, owing to market conditions.

Boston Edison's Sound Record

EDISON Electric Illuminating Co. of Boston has enjoyed a long and stable record, somewhat parallel to that of American Telephone and Telegraph Co., which had its roots in New England. "Boston Edison" (as it is familiarly known) has paid dividends of $7 or more per annum for nearly forty years past—$12 in the period 1911–1932. In 1931 the rate reached a maximum of $13.60, from which it steadily declined to the 1935–6 rate of $8.

During the past decade the company has followed a policy of paying in dividends substantially all the earnings, after allowance for depreciation and maintenance, which items in 1935 amounted to 17.3 per cent of gross revenues. In addition to dividends, the stockholders have received six issues of rights since 1920, the latest expiring January 20, 1936.

The stock sold in the higher brackets until last year when it fell slightly below par for the first time in decades. In 1906–16 it sold below 200 in only one period—the panic year of 1907—and it touched a high of 300 in 1912. During the years 1917 to 1924 the range was somewhat lower, but in 1924–30 it again consistently failed to break the 200 line, and reached a record top of 440 in 1929. Even in 1932 it managed to sell above 200, but last year the range dropped to 98–171. This year to date the stock has had the comparatively narrow range of 156–169, the current price being around 160.

Last year's slight decline in income ($9.43 per share compared with $9.70 in 1934) was largely accounted for by an increase of $835,000 in maintenance and depreciation expenditures (equivalent to about $1.56 per share). These increases occurred despite a gain of only about $310,000 in gross revenues. Had these expenditures increased only in proportion to the gain in gross (about 1 per cent), earnings per share would have amounted to about $10.90 or about $1.20 more than in 1934. This hypothetical gain was due to a reduction in fixed charges. While the $53,000,000 first 3½s issued July 1st last year actually increased interest charges slightly (two short-term 3 per cent note issues having been replaced by long-term 3½s), the burdensome items "amortization of debt discount and expense" and "other interest" were largely eliminated. The company's remaining bond issue, $16,000,000 5 per cent notes due April 15, 1936, were retired at maturity, largely with the proceeds of additional stock offered to the stockholders. In 1936 fixed charges should be further reduced, although with respect to the stock the saving due to retirement of the 5s seems about offset by the increase in the number of shares outstanding.

THE company serves the city of Boston (excluding Charlestown) and thirty-nine adjacent municipalities, with a total population of about 1,371,000. It also sells electricity on a wholesale basis to ten electric companies, municipalities, and railways and also furnishes steam in Boston proper. Electric revenues may be classified as approximately 36 per cent residential and farm, 32 per cent retail-commercial, 19 per cent wholesale-commercial, and 12 per cent municipal, railway, and interchange;

steam revenues amount to about 1.4 per cent of total gross.

The company operates two steam generating stations and is also interconnected with the New England Power Association. Its contract with the latter company was revised last year and provided for a reduction in the cost of current used from $2,025,000 to $1,575,000 (the latter amount being subject to various changes and conditions). The saving "in energy purchased" amounting to about $126,000 in 1935 (which reflected only one-quarter's operation of the new contract) seems to indicate a possible annual saving of about $500,000, which amount would be equivalent to about 81 cents per share.

The company has been active in promotional work and appliance-merchandising campaigns, sales last year registering a gain of 21 per cent. The home service department conducted cooking classes for nearly 30,000 women and sales of electric ranges more than doubled in 1935; many all-electric kitchens were incorporated in new residences.

While kilowatt hours increased nearly 8 per cent last year, two rate cuts (one voluntary) held the gain in revenues to less than 1 per cent. The maximum electric rate per kilowatt hour was reduced by these two cuts from 7½ to 6½ cents, but free lamp service was discontinued in September, 1934; while the latter involved an annual saving of about $500,000, this was partially offset by amortization of the company's investment in lamps on customers' premises.

The size of the company is indicated by the total assets in 1935 of about $182,000,000. Following recent financing funded debt totaled about $53,000,000 or less than 30 per cent of assets, which is a creditable ratio compared with similar systems.

At the current price of about 160, the stock yields 5 per cent and is selling for about 17 times earnings. As the company does an intrastate business, it apparently is unaffected by the Utility Act of 1935, except perhaps in connection with interchange of power with other companies.

Electric Power Index Continues Sharp Climb

THE weekly index of electric power production compiled by the *New York Times*, which is adjusted for seasonal variation, indicates that the industry is still on a sharp upgrade, which it has followed consistently since the fall of 1934. For the week ending May 16th the index stood at 115.5, which compares with about 100 for the corresponding week last year, and with a predepression high of about 106 in 1929. The March dip in the index to slightly below 110, due to the severe floods in the East, was quickly reversed. Gains are fairly uniform for all districts, except that the Rocky Mountain section shows a 20 per cent increase, while New England and Middle Atlantic states have gained only 11.6 per cent and 13.4 per cent respectively.

Judicial Review Halts Commission Orders Re "Original Cost" Accounts

THE court of appeals at Albany on May 19th ruled against the public service commission's order requiring utility companies to show original cost of properties and to set up straight-line depreciation (charging against surplus the price paid for properties above the original cost to the first builder). The court has held that where property has been acquired from predecessor utility companies the rule would involve confiscation of a portion of the property. The decision upheld the previous action of the appellate division, and affects the New York Edison Co. and thirty-eight other utilities in New York state.

On April 11th the commission issued a letter to utility companies, holding that depreciation reserves have been generally neglected to build up corporate surpluses, and that the possibility of Fed-

eral taxation of surpluses should not be ignored. Thus far, however, there has been no indication from Washington that Congress plans any tax on surplus accrued from past (as distinct from current) earnings.

The parallel controversy between the FCC and the telephone companies over a uniform system of accounting (principally with reference to requirements regarding original cost and depreciation) has been carried to the Supreme Court. American Telephone and Telegraph, Ohio Associated Telephone Co., and Eastern Telephone & Telegraph Co. have objected to a ruling by a special 3-judge court in New York city, which denied them a permanent injunction against the commission's order, and have appealed to the Supreme Court.

B.M.T. Earnings Show Improvement

THE down trend in B.M.T. earnings appears to have been definitely checked. April net income showed a gain of about 4 per cent over last year. However, the ten months' net for the common shares was only $4.24 compared with $4.70 for the same previous period.

Utility Stocks Reflect Hopes of "Breathing Spell"

UTILITY stocks have made a slightly better showing than rails and industrials in the "creeping recovery" from the April decline. This appears due to the excellent figures for electric output, continued large appliance sales, and hopes that Congress will adjourn in June without adding to the legislative burdens now imposed on the utilities. According to the *New York Times* "a virtual certainty that there will be no natural gas, Mississippi Valley Authority, or Columbia Valley Authority Act at the present session of Congress is construed by some authorities as meaning that the public utilities will have somewhat of a 'breathing spell' for the remainder of the year."

An illustration of the disturbance to normal business functioning, due to utility legislation already on the books, was reported some time ago by the *Times*. A holding company, presumably to conform to the spirit as well as the letter of the Utility Act, elected a board of directors for one of its operating companies composed entirely of local citizens. Later the operating company tried to sell a small amount of bonds directly to an insurance company for refunding purchases. The insurance company, however, although it found the bonds suitable in other respects, felt that the new directorate had not been properly elected and therefore turned down the purchase.

New York Traction Unification Meets New Difficulties

THE so-called "agreements" for a traction unification plan in New York city reached by Messrs. Seabury and Berle last year with representatives of the I.R.T. and B.M.T., appear to be encountering new obstacles. The transit commission has held several conferences but has not yet made any report. The B.M.T. has made further representations regarding its desire for protection for its various surface lines from unfair competition. It is feared that, under the state unification law as it now stands, the city could operate bus lines without having to obtain any "certificate of public convenience and necessity" from the state transit commission; and failure of the city to seek amendment of the law is said to have irritated B.M.T. representatives.

Recently Mayor La Guardia, in a letter to Chairman Delaney of the New York City Board of Transportation, expressed concern about the future expansion of the city's own rapid transit network. He declared that the city must not be caught napping if unification negotiations proved futile, and urged early action on recapture of the

B.M.T.'s Culver line, which would permit extension of the city's independent subway system to Coney Island.

United Gas' Rodessa Field Income Gains

THE report of United Gas Corporation reveals that subsidiaries' crude oil revenues (largely from the new Rodessa field) in the first quarter of 1936 were four times those of last year. Income from all sources gained as follows (000s omitted):

	Income in First Quarter		*Per Cent*
	1936	*1935*	*Gain*
Natural gas revenues	$8,677	$7,213	20%
Oil revenues	1,144	278	314
Gasoline revenues ...	333	188	77
Sulphur revenues ...	375	206	82
Total revenues ...	$10,529	$7,885	33%
Balance available for parent company ..	4,802	2,916	65%
Net income	3,991	2,172	84%

For the first quarter 21 cents a share was earned on the common stock, compared with $1.56 on the second preferred (against the dividend requirement of $1.75) last year. In the twelve months ended March 31st, $4.08 was earned on the second preferred stock against $1.54 in the preceding year.

Proposed Revision of 77B Affects Associated Gas

ON May 18th the Senate recalled from the House a bill amending § 77B of the Federal Bankruptcy Law, due to assertions that the Senate amendment which made the House bill *retroactive* might void pending court proceedings against Associated Gas & Electric Co. The House bill provides that at least 5 per cent of a company's indebtedness must be represented before proceedings attempting to force it into bankruptcy can be instituted. Former Representative Ansorge of New York, counsel for petitioning creditors in the Associated Gas suit, stated that he knew of no other major petition in bankruptcy now pending in the courts, that Associated Gas has spent large sums in fighting the suit, and estimated that (with the average investor holding less than $1,000 Associated Gas securities) it would require 15,000–30,000 signatures to meet the 5 per cent requirement and "since the Associated Gas & Electric System zealously guards its list of security holders, it would be impossible to organize the security holders for that purpose."

Associated Gas in its "preliminary" statement for the year 1935 reports a balance of $308,813 after charges, compared with a deficit of $179,902 in 1934. This, however, did not include various "extraordinary" expenses, etc. The company is hopeful of benefiting substantially from its past program of exchanging debentures for other securities; such savings for last year were largely offset by initial costs of the plan. The annual reduction of fixed charges accomplished by these exchanges is estimated at $3,000,000.

EHFA Credit Policy Termed "Blackjack"

VICE President Weadock, managing director of the Edison Electric Institute, has criticized the credit policy of the Electric Farm and Home Authority as a "blackjack." The Authority, in conformity with numerous administration agencies, has sought so to adapt its policies as to force rate reductions. Mr. Weadock termed absurd the claim of the Authority that "the risk of extending credit for the purchase of electrical appliances is hazardous in areas where rates for domestic electric power are unduly high," and its resulting decision only to extend credit where rates are below a certain "maximum" level and are later to be adjusted to a still lower "accepted" level. For customers consuming 50–225 kilowatt hours the Authority's so-called "maximum rates" for urban companies are 5 cents–1½ cents, and the "accepted" level is 3 cents–1

cent (rural rates are about 1 cent–½ cent higher). The act of Congress under which the Authority operates did not direct it to make this distinction in extending credit.

He also pointed out that the cost of government for the average family is about 13 times the amount of its electric bill. Electricity costs only about one third of the bread bill, and "the lower income home pays less for its day's electric current than the tax on a gallon of gasoline in many states of the union, and less than the tax on a package of cigarets."

Under the credit policy of the Authority as described, apparently only those living in subsidized power zones will be able to take advantage of its credit to buy electric appliances.

Federal Hydro Program Uneconomic

A COMPREHENSIVE review of the Federal hydro-power program by Frank F. Fowle, described by the *Electrical World* as the first engineer of front-rank standing with the courage to declare that program "haywire," will be published by the Western Society of Engineers. Quoting from the *World:*

> Those most worthy, grave, and reverend seigniors in the halls of Congress and elsewhere in government who have harangued the nation on the harnessing of rushing water and the carrying of nature's boon over long distances on transmission lines to markets in busy cities will not like the cold light of reason thrown on their picture. Many engineers know and have known for years what is wrong with the picture. But Frank Fowle is the first to come right out and say that it costs nearly three times as much to transmit energy as electricity on wires as it does to transport it as coal in freight cars.
>
> As for generation, he showed that, using coal where it occurs, which must be done with water power, the steam station can produce electricity at a cost less than two thirds that of the hydro plant. He asserted the obvious fact that government power undertakings as now conceived can prosper only at the price of destruction of investments already made. He ridiculed the naïve assumptions of urgent necessity for parsimonious conservation of fuel resources as reason for throwing money away on water power. He tore down the fair front of pious concern for the welfare of the nation so that all may see the rottenness of politics behind it. . . .
>
> It is to be hoped, for the good of the nation and of mankind at large, that the professional societies of engineers will take courage from this individual example to assert themselves as the force they should be in determining national policies on engineering matters.

Future of PWA Utility Program Doubtful

WHILE the Washington picture is changing daily, recent developments seem to indicate doubt regarding the administration plans to continue PWA municipal power projects with the aid of the WPA $1,425,000,000 appropriation now contained in the Second Deficiency Bill. Difficulties regarding direct allocation of funds to the PWA were partially met by the administration's plan to make PWA Adminstrator Ickes subordinate to WPA Administrators Hopkins, and to provide WPA labor for the completion of the projects already sponsored by PWA. Mr. Ickes has stated that PWA could complete 3,428 projects costing some $800,000,000, within a year. Some new projects could be handled through its revolving fund. However, Mr. Ickes has insisted on a direct appropriation of $61,000,000 for work on the Grand Coulee hydroelectric dam, the California Central Valley project, and certain other western undertakings. While the Senate made an appropriation for this amount in a departmental bill, the House refused to accept the amendment.

While the Senate appears to have given the President a free hand in the use of the new WPA fund (despite the recent Federal court decision which declared the previous fund illegal), the House seems opposed to further generalized grants. As the bill passed the lower chamber, work-relief funds were described in language which might make it difficult to divert money to Mr. Ickes' projects even though Mr. Hopkins would have nominal supervision.

What Others Think

The Increasing Importance of the Municipal Plant

ONE ordinarily thinks of rural electrification as a matter pertaining to sections lying outside of municipal boundaries and, by inference, as of relatively little concern to cities. In a recent issue of *National Municipal Review*, however, Morris L. Cooke, chairman of the Federal Rural Electrification Administration, tells us that the REA program should interest the city administrators as well as the rural residents.

The purpose of the REA, explains Mr. Cooke, is generally to develop, administer, and supervise projects that will increase the utilization of electric power in all sections. To this end, REA makes loans (at 3 per cent interest) for new construction by responsible parties, repayment of which may extend over a period of twenty years.

On the whole, the REA has not encouraged the building of generating plants as much as the extension of distribution lines for existing plants. This is borne out by the fact that of 44 projects approved, only one contemplates the building of a generating plant. Power for such new distribution lines may come from either privately owned electric utility plants, or from the numerous municipal plants. This is where the cities come in. Mr. Cooke states:

> Municipal plants are frequently well equipped to promote farm electrification and to offer rural service at moderate rates. In fact, the policy of municipals serving REA projects has generally been to grant the same rates to rural consumers as to domestic consumers in town. The directors of a municipal plant might reasonably be expected to have a more intimate knowledge of and interest in the welfare of the prospective rural customers than other utility officers whose acquaintance with a given territory may be confined to their balance sheet. Since they are already operating, municipals may sometimes find it feasible to make short extensions which could not be operated successfully as a separate unit by a new organization. Furthermore, the characteristics of the rural load are frequently such as to produce considerable improvement in the load factor of the municipal system. For example, two major appliances widely used in farming districts are large refrigerators and water pumps. Since these appliances require current during the night, their load would represent a valuable addition to the total load.

OF course, municipal plant extensions to rural areas may at times encounter legal obstructions, notably restrictions against the amount or type of municipal indebtedness and (less often) restriction against municipal operation outside of corporate limits. The REA chief does not believe that either limitation is insuperable. In such contingencies, he says, the farmers' coöperative presents a happy solution.

Farmers' coöperatives are described as nonprofit organizations which are free to build their own lines up to the city gate (with REA funds) and assume responsibility for their own indebtedness. If there should still be local legal restriction against such *quasi* public bodies, then nonprofit utility companies can be promoted and organized among the prospective rural patrons. In all cases REA, it appears, is glad to coöperate with such nonprofit organizations.

As evidence, on page 836, Mr. Cooke cites the table of projects either approved or pending on REA books.

After citing numerous specific examples of communities and localities which have in one form or another found ways and means to tie up with the REA program, Mr. Cooke concludes:

Location of Project	*Municipality Involved*	*Municipality Provides Energy*	*Municipality Services Lines*	*Municipality Is Borrower*
Iowa, Sioux County	Hawarden, Iowa	Yes	Yes	Yes
Tennessee, Rhea County	Dayton, Tenn.	Yes	Yes	Yes
North Carolina, Wilson County	Wilson, N. C.	Yes	Yes [1]	No
Georgia, Wilkes County	Washington, Ga.	Yes	No	No
Ohio, Logan County	Bellefontaine, Ohio	Yes	No	No
Ohio, Champaign-Miami-Shelby Co's.	Piqua, Ohio	Yes	No	No

[1] Provisional.

All of the examples here presented substantiate a few basic assumptions. One is that municipalities are finding it profitable to take a prominent part in the development of rural electrification. Another is that, in spite of obstacles at the outset, some means can be found for adjusting a project to local conditions. Furthermore, whatever the set-up, a gratifying uniformity of control and operation is possible.

To the municipality no less than to the farm consumer the benefits of such coöperative enterprise must be readily apparent. The farmer is aided because he receives electric service at a price he can afford to pay for it, without the necessity of making a large initial outlay for construction costs. Moreover, the rates have been so designed as to encourage the use of electric power for an increasing number of tasks around the farm, so that farming may truly be made more convenient and more productive. By making farm life easier and agriculture more profitable, electric service will render the entire rural area more prosperous. The resulting increase in the value of farm property is of benefit to the municipality.

ANOTHER phase of municipal utility operation which is getting increasing attention is the matter of management. Writing also in the *National Municipal Review*, Chairman Arthur E. Morgan of the Tennessee Valley Authority finds a need for an "institute for managers of publicly owned utilities." Dr. Morgan sees an opportunity for such an organization to render important and valuable service by prescribing representative and accepted standards of administration for municipal utilities. He states:

> A considerable number of these utilities have managers of a very high order. Those managers who represent nonpartisan and nonpolitical administration could organize themselves into such an institute and could develop a code for its membership. Such a code could provide general principles of accounting to prevent manipulation of accounts, and to supply the public with direct, intelligible statement of financial conditions. It could provide for the elimination of political appointments, and for the maintenance of the merit system in selecting and retaining personnel. It could prohibit political campaign subscriptions. In these and in other respects, representative and accepted standards of administration could be prescribed. Anyone failing to maintain these standards would be eliminated from membership in the institute.
>
> If such an institute were established and these standards were to prevail, the fact that any manager of a publicly owned utility was not a member of this institute would at once raise questions in the public mind. If the manager should withdraw from the institute because its standards would not allow him to condone improper practices, the public would at once have notice of such practices. If he wanted to resist improper practices, the prestige of the institute would support him; whereas, at present, he may stand alone against a corrupt governing board. Such an institute would be a standardizing agency, and any publicly owned utility which was not represented in the institute by its manager would at once be under public criticism. The general effect would be to provide a powerful support for managers in maintaining high standards of public administration and would be a great deterrent to politically minded governing boards in any effort they might make to manipulate publicly owned utilities for personal or political ends.

DR. Morgan gave as a specific analogy, the wholesome effect that the rising prestige of the association of railroad auditors had upon railroad management. Prior to the existence of this group the individual auditor sometimes had to choose between his ethics and his job and in the latter case he had to serve as a tool or "front" for financial manipulation. Evidently Dr. Morgan fears that political groups may exercise

Pittsburgh Sun Telegraph

"WHAT'LL I SAY NOW? I JUST BAWLED OUT THE GAS COMPANY AND THEY SAY I'M PERFECTLY RIGHT!"

similar pressure on publicly owned utility management unless it is protected by strong ethical organization. Other services, he visualizes for his proposed institute, would be to serve as a clearing house of information about administrative methods and to maintain a central advisory staff to render technical service to local members at cost, such as representation before state commissions or at other public hearings.

Dr. Morgan, while believing in many advantages of public ownership, fully realizes that it has no magical properties

whereby efficiency and honesty in management become assured as soon as a government takes over utility properties. He concludes on this point:

> I repeat that in the long run the American public will make its choice between public and private ownership of utilities by practical results and not by political theories. The extension of public ownership today is being delayed and hampered by the frequent occurrence of incompetence and mismanagement which in extreme cases may create a greater public burden than exploitation by privately owned utilities.

SPEAKING of the increasing care necessary not only in the operation but in the original inauguration of publicly owned utility plants, Robert V. L. Wright, in a recent article published in *Public Management*, displays a wholesome sense of realism and an uncommon amount of common sense with respect to cities rushing pell-mell into municipal ownership. Mr. Wright is no spokesman for private utility interests. On the contrary, although well grounded in practical experience in building and operating utility, railroad, and telephone properties, he has been with the Public Works Administration practically since its inauguration, serving as its state engineer for Kentucky, electric engineer for the Chicago Sanitary District, and as consulting engineer for Washington state projects. At present he also manages the municipally owned utilities for the city of Avalon, California.

Mr. Wright sketches the comparatively brief history of public and privately owned electric utilities in this country: how in the early days of the electrical art, larger cities were generally served by private interests and smaller communities by public agencies; how the improvement in the technical art brought on the era of merger and consolidation whereby the larger private systems swallowed up the smaller municipal plants, and how this movement although originally sound was pushed beyond its useful bounds when the growth of private financial structures outran engineering economies, with the consequent reawakening of interest in municipal ownership.

MR. Wright warns cities, however, to subject all proposals for municipal utilities to a rigid test of "social desirability." At the end of his article he lists a series of questions which may help to test the soundness of such a proposal:

> 1. Are your present rates and service unsatisfactory?
> 2. Is your city government honest and competent?
> 3. Do the laws of your state permit a municipal plant to serve all classes of business?
> 4. Can private competition be eliminated or controlled?
> 5. Can a plant be built and operated to render service at less than the rates now charged by the private utility?
> 6. Will the present rate comparison probably continue during the useful life of the proposed plant?
> 7. Can you get the money?
> 8. Can the plant be kept out of politics?

On the subject of financial arrangements, Mr. Wright gives specific advice. He states:

> Financial soundness, since the undertaking is primarily an economic one, deserves as much consideration as for any private venture. In this instance, however, dividends take the form of lower cost, locally controlled community service, rather than cash profits—money saved rather than money made. It follows that if the plant can be expected to meet all of its own costs, compensate general municipal funds for loss in utility tax revenue, and provide electric service for less money than a private utility, it is financially sound.
>
> A recent review of several hundred municipal plant proposals has emphasized the importance of the foregoing factors and provided the basis for subsequent comment. A variety of motives is apparent, indicating roughly the degree of social desirability. Probably the largest class emanates from a sincere belief on the part of the community that it can serve its citizens more economically than can a competitor. The second class appears to result from the desire of the ruling element in the community to enter the utility business for profit with which to support other functions of municipal government and thus reduce the local tax rate. This class has quite often been assisted to its conclusion by Diesel engine and other material salesmen. The third class has arisen from a desire to participate in the recent distribution of cheap government money and thus to provide more local jobs and a fatter city treasury.

FROM a legal and engineering standpoint, continues this writer, many projects are carefully thought out and conclusions based on adequate legal investigation and sound technical design. Others, however, represent "haywire" ideas based principally on hopeful thinking. Too often important preliminary work is "performed by engine salesmen or by lawyers and engineers working on a contingent basis, who receive little or nothing unless the project goes through." This puts too much strain on human nature.

To judge from the results of bond elections during the past two years, many communities regard the obligation incurred by revenue bonds less seriously than a general obligation issue. Apparently they are glad enough to accept benefits but loath to accept maximum responsibility. Mr. Wright gives two specific examples of municipal conduct which show how irresponsible city government can sometimes be. He states:

> One example comes to mind of a certain town which was legally able to eliminate the competition and proposed to sell revenue bonds for the construction of a plant. It declined to vote general obligation bonds. An investigation disclosed that revenue bonds previously issued to construct a waterworks had been defaulted, that street and other special improvement obligations were worthless, and that the existing utility company was unable to collect its bills for service. The moral to this tale is as obvious as the city's motives.
>
> Another town sold its municipal plant to private utility operators in the late twenties for nearly 50 per cent more than its cost or worth. Rate schedules were then based on the sale price and hence high. Within the past two years the community endeavored to sell revenue bonds with which to construct a municipal plant and eliminate the purchaser of its former plant. Of course these are horrible examples and by no means representative of municipal plant proposals as a whole, nor of the ethical standard of American city governments.

Mr. Wright's article gives further advice on engineering designs, financing, rates structures, and management of municipal plants. He warns of the "tax-eaters" that have a tendency to live out of the utility crib and recommends the council-manager form of city government as best adapted for developing able and confident utility personnel for municipal plants.

—F. X. W.

REA AND MUNICIPALITIES. By Morris L. Cooke. *National Municipal Review.* May, 1936.

INSTITUTE FOR MANAGERS OF PUBLICLY OWNED UTILITIES. By Dr. Arthur E. Morgan. *National Municipal Review.* May, 1936.

BUILDING A MUNICIPAL ELECTRIC PLANT. By Robert V. L. Wright. *Public Management.* May, 1936.

What Will We Do about Quoddy?

NOW that the Passamaquoddy tidal power project appears headed for indefinite suspended animation if not what the late President Grover Cleveland would call "innocuous desuetude," there remains for us to determine what benefits, if any, are to be derived from this ill-fated excursion into realms of lunar influence. Was it all wasted—this outpouring of more than six million on the remote Maine coast of the Bay of Fundy? Or is there enough salvage to return part, all, or ultimately more than the taxpayers' investment?

The *Engineering News-Record,* which has looked upon various engineering phases of the New Deal at least without bias, and occasionally with professed enthusiasm, states editorially:

> Only in one respect has the delay in putting the project up to Congress been advantageous; Congress now will have the benefit of ten months of intensive study of the project by the Army Engineers. A year ago no one knew whether the plan then proposed was the best or was reasonably feasible, nor did anyone know what it would cost. Now the Army Engineers know a great deal about the practicability of the project that was handed to them last May, and they know

that despite their best efforts to keep down the cost it will cost much more than the original estimate of $36,000,000. How much more they will not say until Congress asks for a formal opinion, as possible modifications are continually being considered.

The most significant modification that has been made is abandonment of the pumped-storage auxiliary power plant because the site selected for the storage reservoir was found to be impracticable and no other suitable site has been found. In place of the auxiliary pumped-storage plant it is proposed to substitute a Diesel or steam-driven plant to fill in the gaps in the power curve when the tidal plant cannot be operated. At first glance this might appear to be a logical proposal, but on more careful study it becomes apparent that the auxiliary plant must have sufficient generating equipment to maintain the primary output of the tidal plant, that it must be run alternately for about five and one-half hours twice each day and shut down for seven hours, a very inefficient method of operation. And all to what end: to save the fuel that would be required to run the plant in the 7-hour runs of the tidal power plant. Against this saving must be set the total capital cost of the tidal power plant, its dams, filling gates and locks as well as the cost of their operation.

The *News-Record* goes on to observe that in the background lies the fact that even the relatively small output of the proposed plant—264,000,000 kilowatt hours—is not needed in the limited territory surrounding the plant and that the possibility of building up a market through the attraction of industries to such a remote region is further obscured by the fact that the "power that could be generated in the present project will be far from cheap."

The *News-Record* says this much in defense of those who have been persistent champions of the Quoddy project: They started out with a scheme that had good prospects of providing cheap power. Marketing and international troubles so complicated the scheme, however, that its execution became definitely uneconomic.

The editorial adds:

> Their error lies in having let their enthusiasm for the basic idea obscure the fact that when confined to the smaller bays within the state of Maine the cost of dams and other necessary elements does not decline nearly as rapidly as does the possible power output.

The editorial concludes with an expression of hope that Congress will hereafter ask Army Engineers to speak their minds freely, even though it may involve implied criticism of administration policy. If this is done, such plans would probably be in the hands of as safe a set of judges as could be found.

Although the press of the United States seems almost unanimous in condemning further work on the Passamaquoddy project at this time, the Maine scheme seems to have found some editorial favor, strangely enough, in far distant New Orleans. There the *Times-Picayune* noted that English publications were taking a keen interest in our Quoddy experiment, and seem to accept its success without question. One London periodical, *The Passing Show,* even predicted that the example set by America would be followed "in every country which can boast of adequate tides." Naturally the *Times-Picayune* was much intrigued by this British adulation and stated:

> From a condensation of that article we learn of a similar project, the Severn Barrage, now under consideration in England and bearing the approval of a government committee. "Every detail of the Severn Barrage has been worked out," we read. "So far difficulties both financial and technical have prevented any large-scale development," but "if experts have their way, work will soon start on the first stages of construction. . . . It would in principle take much the same form as will the Fundy bay construction," but "if the Barrage ever comes about it will be on a far bigger and more costly scale than Fundy bay. At the high spring tides, when the water level rises and falls 50 feet in the Severn mouth, the Barrage will be generating 700,000 horsepower, compared with Maine's 200,000. It will cost $190,000,000 compared with $35,000,000 and its construction will employ an average of 12,000 men for fifteen years."
>
> If hard-headed British experts are convinced that the Severn tides can be profitably harnessed for the production of power, our "Quoddy" project may not be so "visionary" as its American critics charge. "Only one invention," declares *The Passing Show* writer, "is necessary to start a rush for tidal power. The man who perfects an accumulator, or any other storage device which will hold vast quantities of current in a small space, will soar into billionairedom in a few years. He will also change

the face of the world." So who knows whether "Quoddy" is an exploded fantasy, or is destined to an ultimate revival and development that will confound its detractors and mock its political critics?

WHO knows indeed? There are even some skeptical souls here in America who refuse to believe that President Roosevelt will let Quoddy die a natural death when its present funds become exhausted. It isn't like our tenacious President, they say, to let go of an idea without more of a struggle for it. True, the congressional committees expressly tossed more Quoddy appropriations out of the recent Deficiency Appropriations Bill after exacting from WPA chief Hopkins the promise that no part of it would go into the tidal power project. True, President Roosevelt himself is on record unofficially as stating that when more money for Quoddy comes, it will come from Congress. True, PWA chief Ickes appears to have his hands tied as far as rendering financial assistance. It is difficult to see where Quoddy money will come from before at least the next session of Congress and difficult to see it even then. Yet, those in Washington who witnessed the prospect of the Columbia Valley Authority project springing suddenly into action, while the last 74th congressional session was going into the home stretch, are still watching for a long forward pass for dear old Quoddy before the whistle finally blows on the session.

It does not seem likely, but it is still mathematically possible.

—F. X. W.

A JOB FOR THE FUTURE. Editorial. *Engineering News-Record.* April 23, 1936.

AN ENGLISH "QUODDY." Editorial. *The Times-Picayune.* May 4, 1936.

Is the Federal Government Going to Build Steam Plants?

ONE of the most significant points about Senator Norris' Mississippi Valley Bill (at this writing) is § 16 which would authorize the Federal government to erect steam plants as well as hydroelectric plants in developing the Mississippi Valley. This little noted section was discussed at the Senate subcommittee hearings on the bill by Charles W. Kellogg, chairman of the board of Engineers Public Service Company.

Mr. Kellogg questioned this § 16, not only on issue of the constitutionality restrictions on Federal power operations implied in the recent TVA decision of the Supreme Court, but also upon the issue of the propriety of direct governmental competition with private interests. The transcription of the dialogue between Mr. Kellogg and Senator Norris on this matter is most interesting:

SENATOR NORRIS. Then let me say to you about the steam plants it is conceded, I think, by everybody that in carrying out this program of navigation, if you are going to utilize the power that it is necessary to develop in the building of the dam, you will generate a vast amount of what is known as "secondary" electric power. Wouldn't that follow? In other words, if you are building a dam at the mouth of a reservoir and you are holding back flood waters, if that reservoir is only sufficient to hold the estimated flood waters of one season, in order to get ready for the next flood you would have to entirely empty that reservoir?

MR. KELLOGG. Yes, sir.

SENATOR NORRIS. And if you were generating electricity as you emptied it you would reach a time when your generation would be zero. So that often it would happen—it would not be in every case, but it would often happen—that you would generate large amounts of electricity only a portion of the year, and unless you had a large number of such reservoirs within transmission distance of each other you could not let out the water one place and hold it back another and then let it out in the place where it was held back, so as to make a combination of all those reservoirs what would be known as "primary" power.

I think in the act it is expressly provided for, expressly stated, that the object of it

The Detroit News

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is to convert such secondary power as may be generated by the plant into primary power. In other words, that it is not contemplated that the steam power should operate twelve months in the year, but in many cases only a very small portion of the year, in order to convert secondary power into primary power. Whether that is right or wrong, whether we ought to let that secondary power go to waste or sell it for a very small amount compared to what primary power would bring—whether we are justified in erecting a steam plant in order to convert that secondary power into primary power and to make it more valuable, so that we will make money by the operation—that is the object of the steam-power plant provision in this legislation.

MR. KELLOGG. That is correct. Let me answer that in this way, Senator: In the first place, I agree with you entirely that almost any hydro development, even if it is not made solely for navigation or partly for navigation or partly for irrigation, it is very likely to have substantial amounts of secondary power simply because stream flows do vary, almost any stream that I know of, except a few that are so exceptional that they do not change the rule. But why should the government go into steam-plant construction when they can buy this steam relay service at fair rates from some existing agency that has steam plants built for the purpose?

SENATOR NORRIS. Maybe not. There might be cases where it would be inadvisable to build a steam plant if someone had a steam plant there to supply enough power so as to convert the government's secondary power into primary power.

MR. KELLOGG. I should say there, if you will pardon the suggestion, that if the bill should provide that for the purpose of relaying secondary hydro power the government could obtain adequate supplies of steam-generated energy from a company under state regulation, that then the government should not itself build a steam relay.

SENATOR NORRIS. Well, I do not think I would disagree with that, but suppose the government hasn't any authority to build a

steam plant to convert secondary power into primary power, and some private person has a steam plant and he wants to do that; if he knows that the government is going to be completely subjected to his demands, do you suppose he would make the same price to them that he would make if he didn't know that if he didn't make the right kind of price the government would build its own steam plant?

MR. KELLOGG. I do, Senator, because he would be under state regulation.

SENATOR NORRIS. Yes; it is true he would be under state regulation, like a great many others are, where the state regulatory bodies are regulated by the powerful combination of holding companies and other private generating plants. I think it is common knowledge that no matter how honest a state government regulating body may be, it is handicapped, terribly handicapped, because it is, in effect, regulated and controlled by the private combinations. What would you say of a policeman who was put on the street to guard the stores, and if the policeman were not there the stores would probably be burglarized? The very presence of the policeman there would perhaps prevent a crime, and although the policeman may never arrest anybody, his very presence there has amply paid for the expense of compensating the policeman.

MR. KELLOGG. Senator, I think we have all got to assume that all public officials will be honest and efficient. I believe the state regulatory commissions as a whole have done a grand job.

SENATOR NORRIS. I think they have, too, but yet the investigations of the Federal Trade Commission for the last several years show that the state regulatory bodies have been just plastic substances in the hands of the great combinations of power. The records are full of it.

MR. KELLOGG. I would not say that was my experience, Senator. That is a pretty severe reflection, I think, to make on a state commission.

SENATOR NORRIS. I know it is a severe reflection, but it is borne out. It is true.

MR. KELLOGG. The next subject I wish to take up, Senator, you have more or less touched on already; that is what I view as the inconsistency of flood control and power. As the Senator has very properly said, if you are going to control floods with a dam, you have got to have the reservoir behind that dam empty before the floods come along. I think the most ideal flood control I ever heard of was that designed and built by Arthur Morgan years ago, before he became connected with TVA, on the Miami river in Ohio, what is called the Miami conservancy district, for the purpose of protecting the city of Dayton, Ohio, which had a very disastrous flood. Those dams have openings in them.

SENATOR POPE. Are those privately constructed dams?

MR. KELLOGG. No; that was a public district organized by the city of Dayton or by the county in which it is located. It is a public work.

SENATOR NORRIS. It is an organized district, organized under the laws of Ohio. It is a public body.

MR. KELLOGG. Yes. I was not sure whether it was a state body or a county or city body.

SENATOR NORRIS. It is organized, I think, under state law.

MR. KELLOGG. At all events, the dams which were constructed have openings in them such that during the normal condition of things the river flows right through the dam without any let or hindrance. When floods rise high enough to cause danger to the city of Dayton, they can't get through the relatively restricted openings in the dam and are held up, and the size of that opening is designed so that no more water can come past the dam than the levees, the sea walls, at Dayton will take care of without flooding the city. The only time that dam operates or is used for any useful purpose is when floods come. It requires no attendance. There is no opening or closing of gates. There is nothing required except to allow the laws of nature to take their course. That is real flood control.

SENATOR NORRIS. Now, that would very often happen under this bill, probably. No one contends that in every flood-control dam there would be power generated. Where a dam is placed at the outlet of a reservoir, and the reservoir thus made is larger than is necessary to hold any floods that are anticipated or known of, then they can always be held to the amount of water in that reservoir that will be capable of producing power. That will be constant. That will be primary. As I said awhile ago, if you have a reservoir that must be completely emptied in order to take care of the next flood, then the power generated would be secondary, if any was generated. And in some places, like Dayton, the floods are, as a matter of history, many years apart. In some years there would be nothing to amount to anything that would be taken care of there, so that a power proposition there would probably—at least, it was so estimated by Dr. Morgan—would probably never pay, because probably there would only be once in ten years, and only a small part of the time in that ten years, that they would generate any power.

It would be almost valueless; and yet the dam, the reservoir, has got to be there, because no man knows but what the flood may come tomorrow. I think that illustrates the fact that in lots of cases, such as existed in the Miami valley, it would be unwise to go to the expense of trying

to generate power. Besides, if they undertook to hold enough water back there to generate power they might have insufficient space to store a flood, if it should come, and hence tear the whole thing out.

So I don't want you to get the idea that I expect every dam that is constructed under this bill is going to generate power. There will be lots of places where there won't be any; but it is a historical fact that many flood-control dams create a large amount of constant power, because of the fact that the space to hold floods is so great that no one flood will ever fill it. The Norris dam is an illustration of that. It is illustrated by the Guernsey dam in the North Platte irrigation project. There are two dams that create a vast amount of constant primary power. And, incidentally, that has been the one great thing in that great irrigation undertaking that has always paid, and the only one thing. The farmers have been about ruined on account of the depression in agriculture on everything else, but the power has been going on day and night all the time, and the one revenue thing connected with that great project that is coming in every month constantly all the time, and has been the savior, to a great extent, of that project.

SENATOR POPE. Has it ruined any private power projects?

SENATOR NORRIS. No.

MR. KELLOGG. Going on, for the record, with a discussion of the other feature, namely, navigation, it is, of course, feasible to store flood waters at the headquarters of the streams feeding navigable waters, and feed them out gradually during the navigation season, during the dry summer months, to improve the flow of the river and improve the stages of the water for navigation down the river; but in this case, again, your reservoir will be empty at the end of the navigation season.

Now, the conclusion which I draw from these two facts is this—that if a dam, built either for flood control or for the improvement of navigation, does provide any substantial amount of power, I should consider it proof positive that the dam was built too large and too much money was spent on it for those two public functions alone.

Let me give an example again from the Tennessee valley. The figures I am about to give come from House Document 328; the report of the Army Engineers on the improvement of navigation of the Tennessee river show that in the same stretch which the TVA has reported on with respect to eight dams, the Army Engineers computed $58,000,000 as the amount necessary for dams for navigation, and the TVA in that same stretch, with these eight dams, provides an investment of $236,000,000, about four times as much.

What we claim is that when you once get started on the campaign of going in for electric-power production you go away beyond the requirements of flood control or navigation, and really make a very large investment just for the purpose of power. And I want to use these figures, Mr. Chairman, as an example, if an example is needed, as to the probable inadequacy of the 6½ per cent charged to date by the TVA for the power development part of this program; that in this comparison between what the Army Engineers said it would cost to improve that stream for navigation through a given stretch and what the TVA say they require for these eight power dams, instead of having about one sixteenth for power you would have in this case about 75 per cent, my claim being that all expenditures over what are required for navigation must be for something else, namely, for power. It reminds me of a story about a man who lost a quarter down the cracks of a boardwalk, and he scratched his head for a while and finally threw a dollar in after the quarter so it would be worth while to tear up the sidewalk to get back the money. That is about the ratio that this great power development on the Tennessee river has to do with what would be required according to the Army Engineers for navigation.

THE above excerpts are quoted at length because, in the opinion of this reviewer, no digest could express the problem under consideration quite so succinctly as the original text.

—M. M.

HEARINGS BEFORE SUBCOMMITTEE OF COMMITTEE ON AGRICULTURE AND FORESTRY. Part I. March 24 to April 15, 1936. S. 3524.

Notes on Recent Publications

INDEX NUMBERS TO DETERMINE PUBLIC UTILITY RATE BASE. W. M. B. *Virginia Law Review*. November, 1935.

TAMING WILD GAS. By Marc A. Rose. *Today*. December 28, 1935.

THE PUBLIC UTILITY ACT OF 1935. By John Bauer. *The People's Money*. March-April, 1936.

T. V. A. By Talcott Powell. *The Elks Magazine*. September, 1935.

The Latest Utility Rulings

Local Distribution from Interstate Pipe Line Not Interstate Commerce

THE Arkansas Department of Public Utilities held that it had jurisdiction over charges for gas sold and delivered to pipe-line customers although the pipe line brought gas into the state from Louisiana. The commission held that the sale, distribution, and delivery in Arkansas of the gas transported from Louisiana under the facts shown was not a transaction in interstate commerce.

Gas moves across the state line through three different pipe lines for distribution to industrial consumers of large quantities of gas and to companies purchasing gas for resale and distribution to consumers. Spurs or laterals have been constructed from the pipe lines to the places of consumption. There are so many customers receiving gas from the pipe-line system that the commission observed that there is "no material difference between the pipe-line system in Arkansas and any ordinary town or city distribution plant except in the extent of the territory served, the density of the customers, the size of the pipe, and possibly the quantity of gas consumed by some of the customers."

The "original package" in the case was said to consist of the volume or quantity of gas crossing the state line. This package, it was said, is broken and a part of its contents diverted at each tap in Arkansas serving a consumer or city plant. All gas transported into the state is for consumption therein except a small quantity consumed in Texas and Louisiana. This gas, it was said, is not earmarked, labeled, intended for, or identified in any particular way for any particular customer.

The commission said that for all practical purposes the method of distribution of gas in Arkansas would not be different if, instead of a pipe-line system, there should be located at some central point a tank of the same capacity as the pipe-line system, and by some means this tank should be kept constantly filled with gas drawn from the Louisiana fields and the demand of each city distribution plant, pipe-line customer, and more than 300 rural consumers should be supplied directly from the tank.

The commission not only held that such sale, distribution, and delivery of gas is not interstate commerce, but also referred to the rule that the business of supplying on demand local consumers is a local business, even though the gas be brought from another state and drawn for distribution directly from interstate mains. Missouri ex rel. Barrett *v.* Kansas Nat. Gas Co. 265 U. S. 298, P.U.R.1924E, 78. Since all of the pipe-line customers in the state are consumers of gas with the exception of three distributing companies, the sale and delivery of gas to those pipe-line customers was said to be a local business subject to local regulation.

The commission did not give any weight to the fact that contracts for gas were executed in Louisiana, declaring that although at one time, in determining whether a transaction was interstate or intrastate commerce, a great deal of weight was given to the place of contracting, under modern conditions and rules the place of execution of a contract is no longer conclusive. *Re Arkansas Louisiana Gas Co.* (*Docket No. 13–A*).

Commission Considers Problems of Natural Gas Substitution

THE Michigan commission approved the construction of a natural gas pipe line by the Grand Rapids Gas Light Company in order to obtain a natural gas supply for the city of Grand Rapids. The company's plan to use mixed natural and artificial gas rather than pure natural gas, at least for the present, was approved.

The commission reviewed the history of natural gas development in the state of Michigan. Natural gas in that state comes mostly from what is called Michigan pay sand. It is not found in open spaces or in pools. The pay sand underlying the surface of the state is not a continuous sheet. The commission emphasized the fact that the amount of reserves of natural gas in a certain area does not at all depend upon the amount of so-called "open flow." Comparing the gas sands with a barrel, the commission pointed out that digging many large holes would remove the contents more rapidly, but only so much could be taken out as was originally contained. The commission, in reaching its conclusion, considered estimates of the gas reserve and the present requirements of users of gas from the gas field. The opinion continued:

> Act 9 of the Public Acts of 1929 places upon the commission the duty and the authority to determine that a natural gas pipe line when constructed and in operation will serve the convenience and necessities *of the public* before approval is granted. The commission conceives this to mean the convenience and the necessities of all the public, meaning all the people of the state. This includes gas well owners and producers, gas consumers, municipalities, and public utilities investing money in pipe line and includes every locality from the field to the consumer. It also includes the conservation of natural gas resources to ultimately serve the best interests, the convenience and necessities of all the people of Michigan.

Mixed gas, it was observed, served the convenience and necessities of the city of Grand Rapids, although full natural gas would be better. The troublesome question was said to be whether there was enough natural gas reasonably certain to serve the community, and in determining this fact the commission believed it best to be somewhat conservative in the interests of all the public.

In regard to the question of proration between those having control of gas fields, the commission said that it did not accede to the viewpoint that anyone who may contract for or purchase natural gas in any gas field *ipso facto* has the right to take such gas in any quantity which may appear desirable to the purchaser. *Re Grand Rapids Gas Light Co.* (*D–3000*).

Telephone Rate Reduction Order Sustained

THE supreme court of Oklahoma sustained a commission order reducing rates where the earnings allowed by the commission would permit a charge of 5 per cent on depreciable property annually for depreciation and amortization and a return of 7 per cent annually.

The court rejected a contention that an allowance of 10 per cent of the total value of the properties should be made as a separate item for going value. The court was of the opinion that all the factors entering into the ascertainment of a rate base by the reproduction cost method adequately covered what is generally termed "going concern value." The commission, moreover, had allowed in the rate base an amount for "cost of securing franchise permits, subscribers' contracts, etc."

The objection had been raised that the commission erred in ordering a reduction on multiparty telephone lines for the reason that no complaint had been made in respect to such charges

and no evidence was introduced or heard with respect to their reasonableness.

The court pointed out that the statutes gave the commission power and authority to regulate and prescribe rates and that this power was not limited to complaints filed, but was inherent in the authority delegated to the commission. *Western Telephone Corp. v. Corporation Commission of Oklahoma, 56 P. (2d) 899.*

Reduction in Hand-set Telephone Rates Held to Be Invalid

THE appellate division of the New York Supreme Court held to be illegal a commission order reducing rates of the New York Telephone Company for hand-set instruments from 25 cents to 15 cents a month. The basis of the decision was that a large revenue loss was involved in the reduction and that the company had not been permitted to submit evidence on the question whether its net operating income was inadequate.

Justice Hill, delivering the opinion for the majority of the court, declared that if a rate for a particular item of service could be reduced in this way, each of the many items of services furnished by the company might be reduced separately, still with no evidence in opposition from the company.

Justices Bliss and Heffernan in a dissenting opinion declared that so long as the rate on this particular item is reasonable and not confiscatory it cannot affect the general rate structure and be the cause of rendering such general rate structure confiscatory. The inadequacy in the general rate structure, it was said, lies in another direction.

The case was remanded to the commission, which, it was held, must receive testimony offered by the company which had previously been excluded. *New York Telephone Co. v. Maltbie.*

Charge for Meter Testing Held to Be Improper

THERE is no authority by which an electric utility in Michigan has the right to make a charge direct to a customer for the routine testing of meters, it was said by the Michigan commission in a case where charges of a summer resort company furnishing utility service were under investigation.

The company procured its electric current for distribution to cottage owners from the Consumers Power Company. The producing company, upon changing its equipment from 30-cycle to 60-cycle frequency, rewound the meters used by cottage owners in the summer resort but made no charge for this service. Therefore, the resort company incurred no expense except the taking of the meters from the cottages, delivering them to the Consumers Power Company, and returning and attaching them to the customers' premises. It attempted to make a charge of $4 to each customer for this service. The commission held that it had no right to impose such a charge.

The company was ordered to bear the expense and to apply as a credit upon seasonal bills the amount paid by certain customers, and in the case of customers who had not paid the charge to test their meters and reinstall them without direct charge.

The commission also reduced rates, authorized the collection of the seasonal minimum charge in advance each year, excused the company from making monthly meter readings because of the seasonal character of the service, and provided that when a cottage owner

should vacate his cottage at the end of the summer season he should pay for any extra electricity used over and above the amount covered by the minimum bill. *Martindale et al. v. Macatawa Park Co.* (*D–2084, D–2725*).

Federal Motor Carrier Act Does Not Entirely Supersede State Powers

THE supreme court of Florida, in holding that the driver of an interstate motor vehicle operated for hire over Florida highways might be prosecuted because of operation without a certificate of registration from the state commission, ruled that the mere enactment of the Federal Motor Carrier Act of 1935 did not *ipso facto* suspend nor *eo instanti* supersede the laws of the state of Florida applicable to interstate motor carriers, but left those laws to be coöperatively applied in so far as they could be without overriding, hindering, burdening, or embarrassing the regulations of Congress applicable to the identical subject matter. Justice Davis made the statement:

> Paragraph (c) of § 202 of the United States Motor Carrier Act 1935 (49 USCA § 302 (c)) provides in terms that nothing in the Federal act shall be construed to affect the powers of taxation of the several states or to authorize a motor carrier to do an intrastate business on the highways of any state, or to interfere with the exclusive exercise by each state of the power of regulation of intrastate commerce by motor carriers on the highways thereof.
>
> The necessary intendment of this clause of the United States Motor Carrier Act 1935, as we construe it in so far as any state has previously set up and put into operation a system of statutory provisions for regulating traffic and commerce on the state's highways by motor carriers for hire or compensation, all state-made statutory regulations referable to the state's inherent powers of taxation, the state's police authority to reasonably conserve its proprietary rights in its roads as an incident to its right of ownership thereof by imposing nondiscriminatory regulations as to use applicable to all traffic generally, whether interstate or intrastate, and the state's powers to exercise complete and sole regulation of all intrastate commerce and traffic by motor carriers on state highways, remain severally undiminished and unimpaired by the Federal act aforesaid.

Lowe v. Stoutamire, 166 So. 310.

State Jurisdiction over Freight Rates on Shipments Originating in Other States

AN order of the Ohio commission directing two railroads to adhere to local or intrastate rates in switching and delivering carloads of coal to consignees in Ohio was sustained by the United States Supreme Court. Objection had been made that because the coal had been mined in Pennsylvania the commission was trenching upon the jurisdiction of the Interstate Commerce Commission.

The owner of coal mines in Pennsylvania conveyed the coal in its own cars and barges to Ohio, where the coal was dumped, washed, freed from foreign matter and impurities, broken up or assorted into sizes, and then for the first time made ready for shipment to fill specific orders, transportation from there on being conducted by common carriers.

Justice Cardozo, delivering the opinion, explained that not all commerce is transportation and not all transporation is by common carriers by rail. The only transportation of coal by common carrier was within the state of Ohio. He refused to accept the theory that transportation by a common carrier might be combined with carriage by an owner for the purpose of subjecting the whole to the operation of the statute when the constituent parts would be exempt. *Pennsylvania Railroad Co. et al. v. Public Utilities Commission of Ohio et al. 56 S. Ct. 687.*

Unlimited Property Transport Not Allowed on Busses

THE South Dakota commission denied authority to amend an operating certificate so as to permit the hauling of property in unlimited quantities along with passenger business. The present rule limits bus operators to the hauling of light parcels and express, and the board has construed light parcels and express to mean individual shipments not exceeding 50 pounds in weight.

Safety of passengers being carried by common carriers was said to be the first consideration. The commission said it was a well-known engineering fact that the lower the center of gravity of an automobile, the less the danger of having an accident by tipping over. To permit a carrier to haul a large cargo of property, a good percentage of which would be loaded on top of the vehicle, would naturally increase the danger to the passengers. Therefore, this situation could not be permitted. The commission also said:

> It is a well-known fact that when a carrier must make a lot of stops to take care of details incidental to the hauling of property, expeditious service cannot be rendered the passengers.

Re Wolting (5674-a).

Commission Cannot Order Continuance of Motor Coach Service

THE Michigan commission held that under the statutes it was without authority to make any order relative to service; that is, any order relative to particular trains or particular train schedules, until such time as it might be found by the commission that the service is "unreasonable, inadequate, or unjustly discriminatory."

Inasmuch as motor coach service which had been inaugurated by a railroad company had not yet been abandoned, and inasmuch as there could be no proof until after such abandonment that inadequate service was being rendered, it was the opinion of the commission that it was without authority, irrespective of whether the service was being rendered at a profit or a loss, to make any order compelling the railroad company to continue operation of the motor coach service. Complaint had been made to the commission that the railroad was threatening to discontinue the service because it had been carrying on its operations at a loss. *Davis et al. v. Michigan Central Railroad Co. (D–3003).*

Other Important Rulings

AN appellate term of the New York Supreme Court held that a customer of an electric utility could not recover penalties where the company had discontinued service and removed its meter because of a default in payment of a service charge, where the customer had not made written application for restoration of the meter, and where there was an additional service charge due and unpaid for current supplied to the premises occupied previous to the time that the charge was incurred, although the earlier charge was incurred upon an application signed by the customer's son. *Satra v. Brooklyn Edison Co., Inc. 285 N. Y. Supp. 794.*

The supreme court of Kansas held that the liability of a motor carrier which purchases the business, rights, and assets of another motor carrier and receives the transfer of the certificate of convenience and necessity (containing the order of the commission requiring it to assume the duties, responsibilities, and liabilities existing under and by virtue of such certificate) does not include un-

paid rent of a garage leased by the former motor carrier, as such liability does not exist under and by virtue of such certificate. *Mank et al. v. Southern Kansas Stage Line Co. 56 P. (2d) 71.*

The Minnesota commission made a reduction in telephone rates, holding that a fair rate of return for the company would be 6 per cent. *Re Tri-State Telephone & Telegraph Co. (M–1956).*

The Pennsylvania commission dismissed complaint against a 60-cent customer charge of a natural gas company where the complaint was based upon the fact that in near-by communities there was a minimum charge of $1 per meter per month. Discrimination, it was held, had not been shown. *Ligonier v. Peoples Natural Gas Co. (Complaint Docket No. 10318).*

Another type of business was excluded from the category of public utilities when the supreme court of Florida struck down legislation attempting to fix prices for the barbering trade, the court declaring that the legislature may not by its fiat convert a private business into a public utility. *State ex rel. Fulton v. Ives et al. 167 So. 394.*

The Pennsylvania commission held that it could not approve the sale of public utility property by a partnership to a foreign corporation unless and until the corporation had secured from the commission a certificate of public convenience evidencing approval of its right to do business in the state and the proposed vendors had secured like approval of the sale of their property. The commission pointed out that the vendor rather than the vendee was the proper party to seek approval of the commission. *Re Triangle Co. of Pennsylvania (Application Docket No. 34101).*

A Federal circuit court held that a commission order requiring a railroad to refund to a shipper all amounts in excess of a stated sum paid, but which did not determine or purport to determine the amount of such excess, could not be made the basis for an action by the shipper to recover the amount from the railroad company. *Northern Pacific Railway Co. v. Sauk River Lumber Co. 82 F. (2d) 519.*

The Louisiana commission, in considering complaints against freight rates on sand and gravel, answered a contention that it had no jurisdiction to prescribe new rates where present rates had not been attacked, with the statement that it is the function and unquestioned right of the commission to remove unjust discrimination where found to exist, and the removal of discrimination where found comes within the purview of just and reasonable rates. *Charles Black Sand & Gravel Co. v. Illinois Central Railroad Co. (Order No. 1720, Nos. 2405, 2450).*

The supreme court of Missouri held that it did not have jurisdiction of an appeal from a judgment of the circuit court affirming a commission order granting a certificate of public convenience and necessity for bus line operation, since the public service commission is not a "state officer" within the meaning of the constitutional provision giving jurisdiction in cases where a county or other political subdivision of the state or any state officer is a party. The legislature, it was held, is powerless either to add to or subtract from the jurisdiction as conferred by the Constitution. *State ex rel. Pitcairn et al. v. Public Service Commission, 92 S. W. (2d) 881; State ex rel. Orschein Brothers Truck Lines, Inc. v. Public Service Commission, 92 S. W. (2d) 882.*

The California commission held that it had power to abolish grade crossings by physical closing and had the further power to require municipalities to proceed to close any portion of a public street lying within a grade crossing. *Re Southern Pacific Co. (Decision No. 28716, Case No. 4092).*

NOTE.—The cases above referred to, where decided by courts or regulatory commissions, will be published in full or abstracted in *Public Utilities Reports.*